

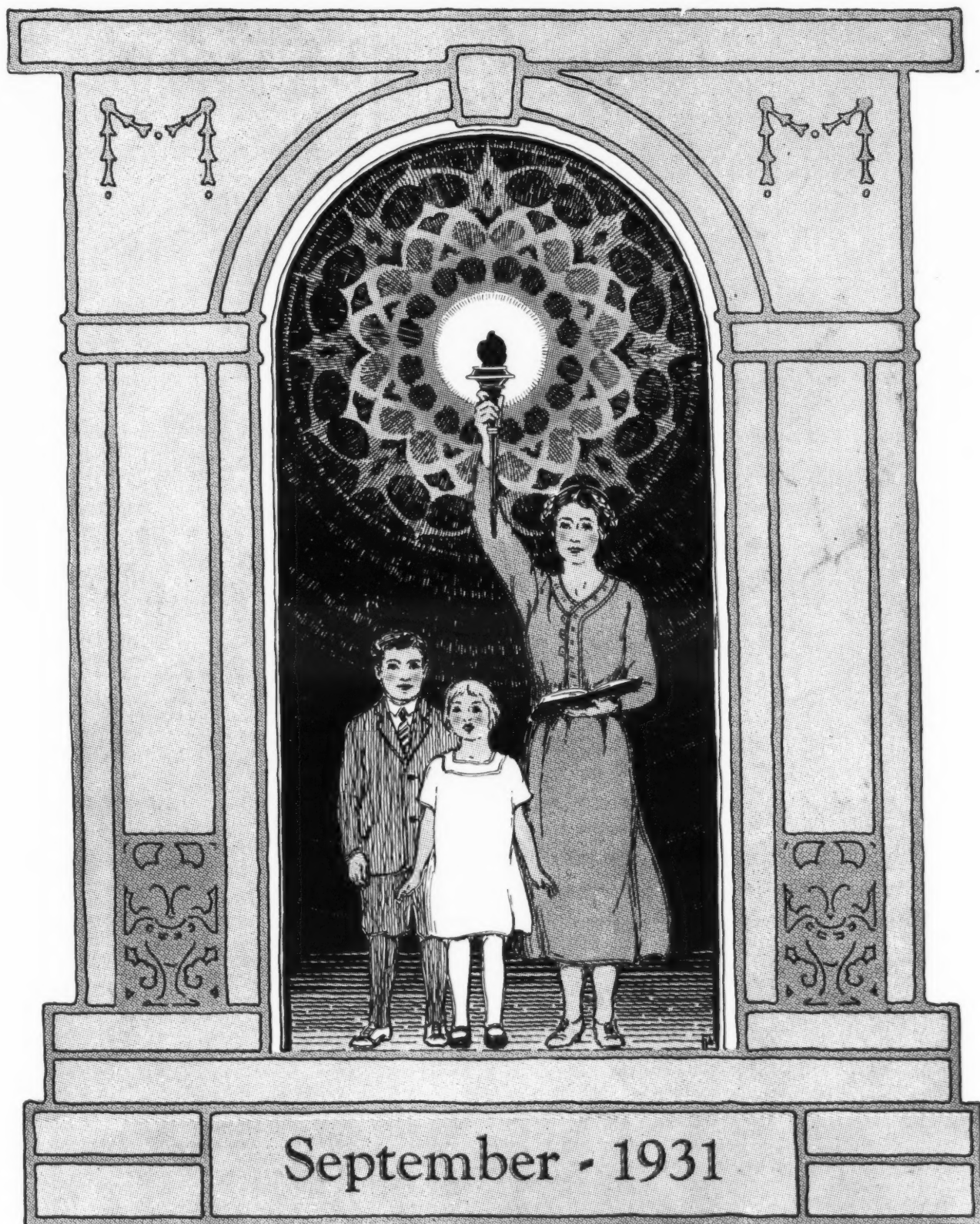
NEW YORK
GENE
UNIV. OF CALIF.

THE AMERICAN

SEP 2 1931

School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION.



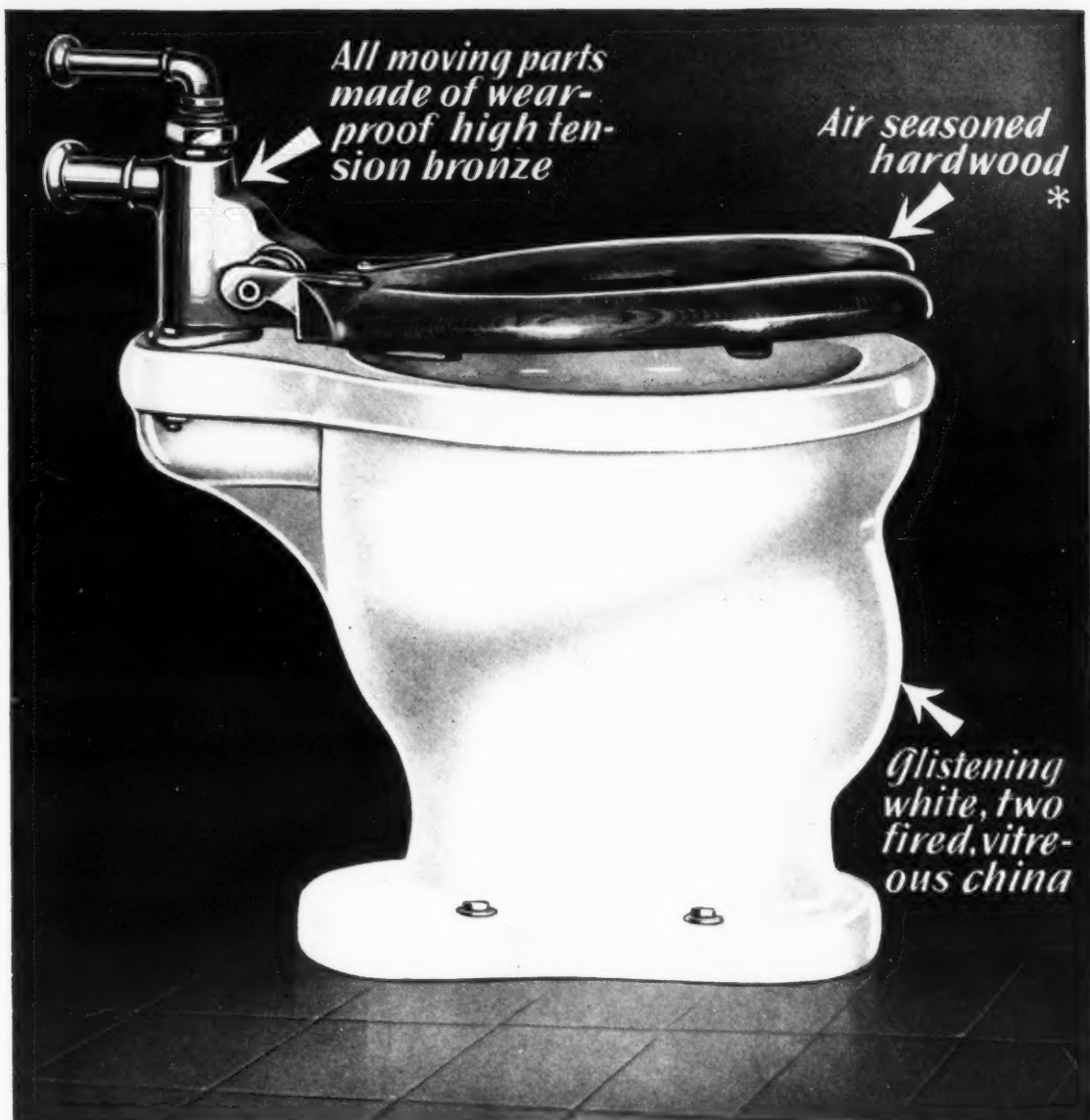
The Bruce Publishing Company
Milwaukee, Wisconsin

New York

Chicago



Vogel Number Ten-A Seat-Action Closet Combination.



The most important function of school closets is to guard the children's health

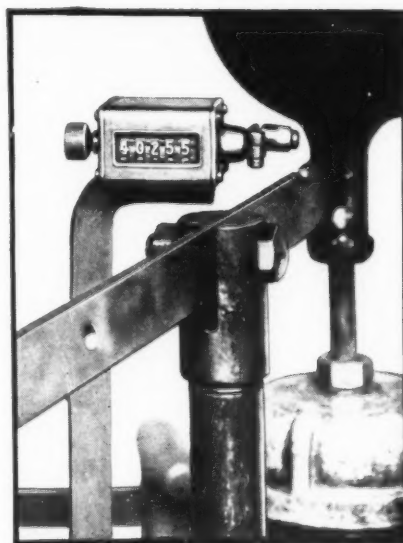
VOGEL Number Ten and Ten-A Closets do this always, because

... Vogel Closets, being seat-action, cannot remain unflushed. We all know children are careless and will forget if given the chance, but with Vogel Closets there is no chance to forget ... they flush every time.

Think of the danger to the health of the children if closets are left unflushed, and you will realize the importance of installing Vogel Number Ten and Ten-A Closets in your school.

Literature designed especially for school boards, architects, and engineers, describing the efficiency and economy of Vogel Closets, will be sent promptly upon request.

JOSEPH A. VOGEL COMPANY
Wilmington, Del. St. Louis, Mo.



The Vogel Closet, still on the Endurance Test started July 16, 1929, has now flushed more than 340,000 times, without even a washer being renewed.

VOGEL *Products*

PATENTED

An Important Announcement

by the Manufacturers of the famous "Pyramid" brand Natural Slate Blackboard

As schools prepare for busy days after the vacation period, remember that students and teachers alike can do better work on clean, fresh blackboards.

Wash them at least once a week with clear water and a little ammonia.

Change water two or three times while washing. Wipe them dry with a rubber squeegee.

Regardless of what the opinions of some may be, water will not harm slate blackboard, because it is a natural solid rock. . . .

This announcement is made in the interest of school officials, teachers and students, in good faith by this Company. We invite inquiries on the care of your blackboards and sound advice will be given each particular case after thorough investigation.



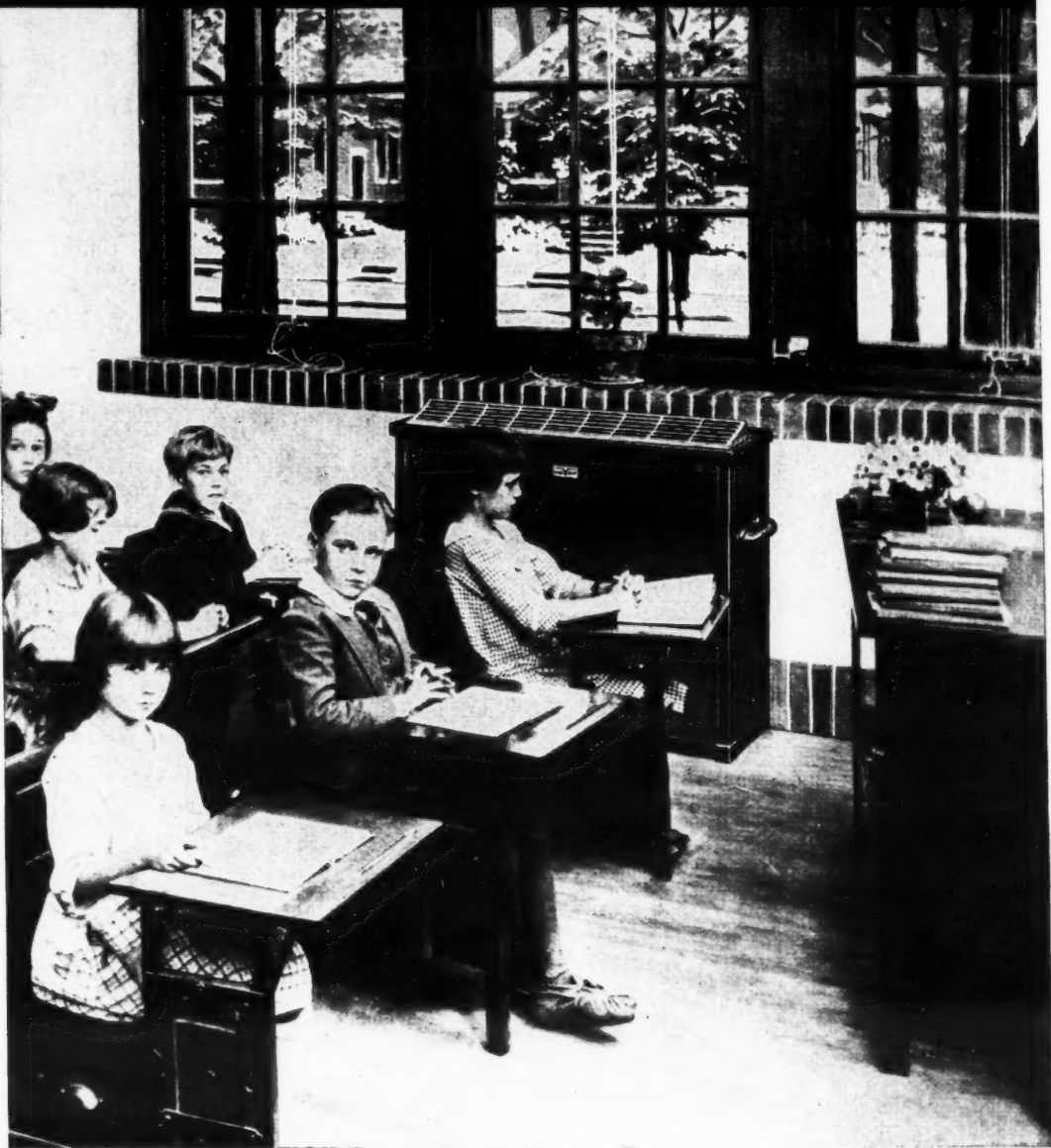
NATURAL SLATE BLACKBOARD COMPANY

Department D-9, Pen Argyl, Pennsylvania.



© 1931
T. H. N. Corp.

THE HERMAN NELSON CORPORATION



Univent Ventilation because of definite results it achieved in the schoolroom, established the popularity of Unit Ventilation. But only the Univent can give Univent Ventilation.

Where the ventilation requirement is: a continuous supply of outdoor air to every pupil in the room, the Univent gives the proper atmospheric conditions in the simplest, most effective and economical manner.

It brings in outdoor air—cleans it, heats it to the right temperature and distributes it throughout the room with gentle air motion but without draft.

Over ten years of Univent Ventilation in schools throughout the country have demonstrated the fact that the architect or engineer who specifies Univent Ventilation is taking no chances.

Write for the book—"Univent Ventilation".

HERMAN NELSON

UNIVENT

(TRADE MARK)

VENTILATION

The Herman Nelson Corporation are makers of the Univent System of Ventilation, the Her-Nel-Co System of Ventilation, the Herman Nelson Invisible Radiator, the Herman Nelson hiJet Heater, and other heating and ventilating equipment.

A HERMAN NELSON PRODUCT

Factory at Moline, Illinois • Sales and Service Offices in all Principal Cities

BELFAST, ME.
BOSTON
SPRINGFIELD, MASS.
PROVIDENCE, R. I.
HARTFORD, CONN.
NEW YORK CITY
SYRACUSE
ALBANY
ROCHESTER
BUFFALO
PHILADELPHIA

SCRANTON
KINGSTON, PA.
HARRISBURG
PITTSBURGH
JOHNSTOWN, PA.
ALLENTOWN, PA.
ERIE, PA.
WHEELING, W. VA.
WASHINGTON, D. C.
BALTIMORE, MD.
CHARLOTTE, N. C.

GRAND RAPIDS
SAGINAW, MICH.
DETROIT
CLEVELAND
COLUMBUS
CINCINNATI
TOLEDO
INDIANAPOLIS
EVANSVILLE, IND.
CHICAGO
PEORIA, ILL.

DES MOINES
MILWAUKEE
APPLETON, WIS.
MINNEAPOLIS
DULUTH
ST. LOUIS
BIRMINGHAM
NASHVILLE
CHATTANOOGA
MEMPHIS
NEW ORLEANS

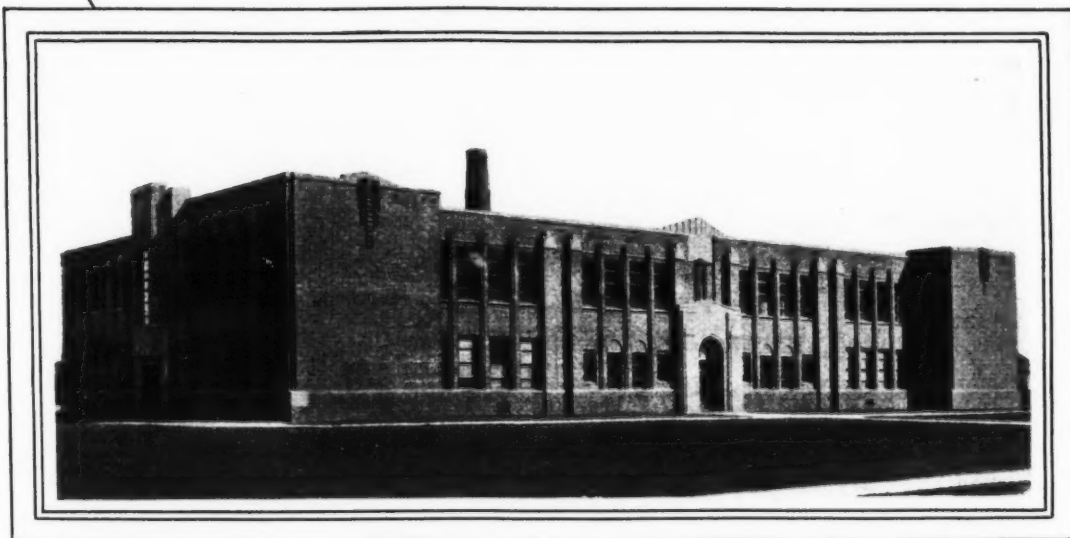
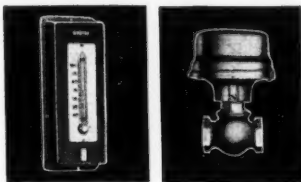
MIAMI
DALLAS
OMAHA
EMPORIA, KAN.
KANSAS CITY
DENVER
SALT LAKE CITY
BUTTE, MONT.
SPOKANE
PORTLAND, ORE.
SEATTLE

SAN FRANCISCO
LOS ANGELES
VANCOUVER, B. C.
TORONTO, ONT.
WINNIPEG, MAN.
CALGARY, ALTA.
LONDON
OSLO
MELBOURNE
TOKIO, OSAKA
BUENOS AIRES

JOHNSON

Heat and Humidity Control

The All-Metal System, The All-Perfect Graduated Control Of Valves And Dampers, The Dual Thermostat (Two Temperature) or (Night And Day) Control, Fuel Saving 25 to 40 per cent.



The Denkman School,
Rock Island, Illinois.
Horn & Sandberg, Architects.

DIRECT AND INDIRECT RADIATION IN THIS SCHOOL BUILDING JOHNSON CONTROLLED

The Johnson Dual (Night and Day, or Two Temperature) Thermostat is applied to all the heat sources in this building. Individual room thermostats control the unit ventilators and the direct radiator valves. Pneumatic switches are installed for the operation of all fresh air, return air and foul air dampers of the building. The Dual System of Johnson Control provides for automatic temperature regulation as each room or section of the building separately requires . . . the temperature at normal

during occupied periods, and reduced during unoccupied periods, at different hours of the day or different days of the week as desired, or for the night after the building is vacated. Automatic regulation for correct temperature condition throughout the building is reliably accomplished, and at the same time a large fuel economy is produced by the Johnson Dual, or Two Temperature, System Of Control.

JOHNSON SERVICE COMPANY

507 E. MICHIGAN ST. Established 1885 MILWAUKEE, WIS.

Albany
Atlanta
Baltimore
Boston
Buffalo
Chicago

Cincinnati
Cleveland
Dallas
Denver
Des Moines
Detroit

Greensboro, N.C.
Indianapolis
Kansas City
Los Angeles
Minneapolis
New York

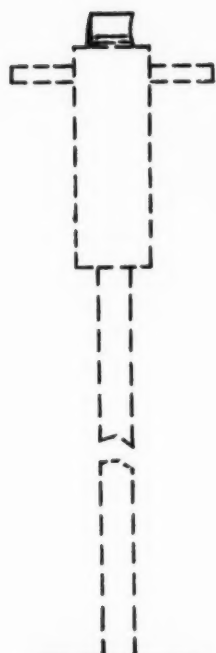
Philadelphia
Pittsburgh
Portland
St. Louis
Salt Lake City
San Francisco

Seattle
Calgary, Alta.
Montreal, Que.
Winnipeg, Man.
Toronto, Ont.
Vancouver, B.C.

JOHNSON

Each Johnson Installation Made By Johnson Mechanics Only. Every Johnson Installation Inspected Annually Without Charge. 30 Johnson Branches Insure Emergency Attention Within 24 Hours Anywhere.

SERVICE



Von Duprin

Self-Releasing Fire and Panic Exit Latches

For the Initiated

The architect who specifies Von Duprin devices with the least hesitation is usually the man whose clients have experimented with the idea of saving a few dollars on the initial investment in panic bolts.

This architect knows it is no mere accident that Von Duprins operate on the doors of school-houses year after year with practically no attention. He

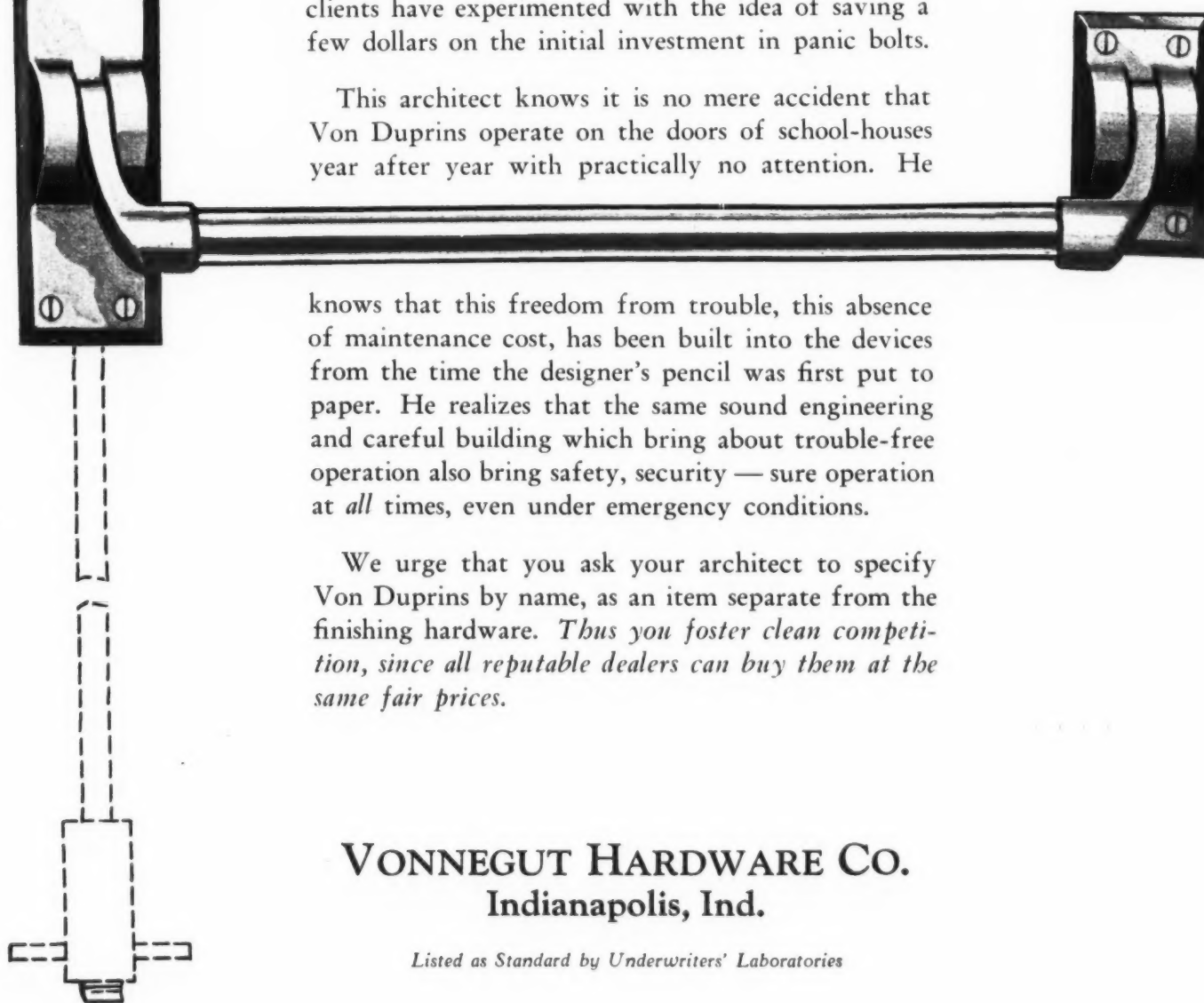


knows that this freedom from trouble, this absence of maintenance cost, has been built into the devices from the time the designer's pencil was first put to paper. He realizes that the same sound engineering and careful building which bring about trouble-free operation also bring safety, security — sure operation at *all* times, even under emergency conditions.

We urge that you ask your architect to specify Von Duprins by name, as an item separate from the finishing hardware. *Thus you foster clean competition, since all reputable dealers can buy them at the same fair prices.*

VONNEGUT HARDWARE CO.
Indianapolis, Ind.

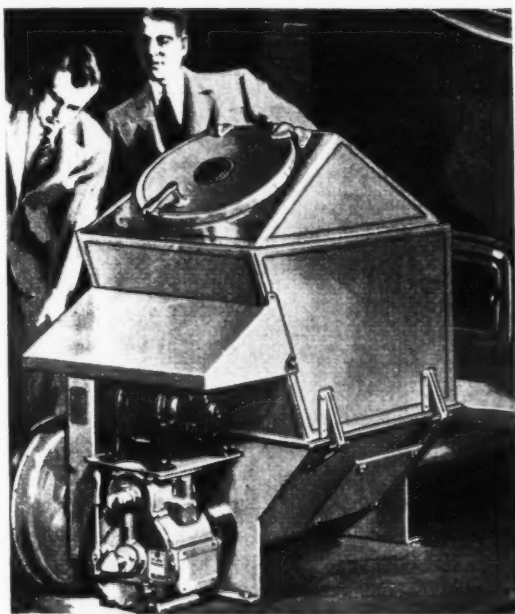
Listed as Standard by Underwriters' Laboratories





Central School, Albert Lea, Minn. "Fuel cost savings of 33 per cent with Iron Fireman. Eliminates our smoke, saves a great deal of labor and our boiler is practically free from soot."

IRON FIREMAN can heat your school better *...and for less money!*



There is an Iron Fireman size and model for all types of schools buildings, industrial plants, and for every home, large or small.

Automatic Coal Burner sets new standards of efficiency and economy for schools and colleges

School boards, ever mindful of their responsibility to taxpayers and students, are swinging more and more to automatic coal firing with Iron Fireman. The reasons are obvious. Taxpayers' money must do double duty. Students must have even temperatures to do efficient work. Iron Fireman answers both demands. This modern, automatic coal firing device installed in school boilers cuts fuel costs from 15 to 50 per cent, reduces labor costs, maintains room temperatures at the required degree regardless of weather conditions, and eliminates smoke nuisance.

Hundreds of users report yearly savings averaging 31.62 per cent on fuel costs alone after Iron Fireman replaced other types of firing. Add to this other savings that result from automatic operation, from ending the wasteful smoke nuisance, from increasing heating plant efficiency, and it is easy to understand why many schools and colleges regard Iron Fireman as the best investment they ever made.

WHAT WILL IRON FIREMAN SAVE YOU?

Why not get Iron Fireman performance facts as they apply to your own school? Your dealer will gladly survey your heating plant and submit a report on what Iron Fireman should save for you. This service is free and involves no obligation. Iron Fireman can be quickly installed in your present plant and convenient terms of payment can be arranged. Iron Fireman Mfg. Co., Portland, Oregon. Factories: Portland, Cleveland, Toronto, Canada. Branches or subsidiaries in Chicago, St. Louis, New York, Milwaukee. Dealers everywhere.



High School, Walla Walla, Wash. "In our Sharpstein School and Green Park School, Iron Fireman is saving us better than 40 per cent in fuel cost over hand firing. These machines have made such a good showing that the School Board had three Iron Fireman put in the High School plant and another in the New Paine School building."



IRON FIREMAN

AUTOMATIC COAL BURNER

THE MACHINE THAT MADE COAL AN AUTOMATIC FUEL

-----MAIL THE COUPON-----

IRON FIREMAN MANUFACTURING CO.
Portland, Oregon, Department AS-6

Please give me full information regarding Iron Fireman.

Name

Address

City

Saves everywhere . . .



Thorough cleaning . . . quickly . . . without raising dust.

. . . and everybody

THERE is not a corner of any modern school where the Spencer Central Cleaning System cannot save every day in the year.

In the corridors—during class time—its powerful suction and lightweight tools pick up the tracked-in dirt quietly and quickly, before it has a chance to spread.

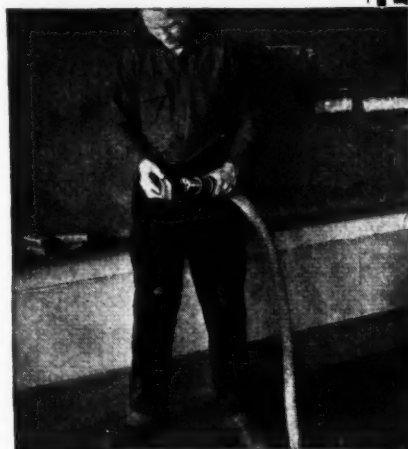
In the rooms, it gets under and around desks easily—removes chalk dust and dead air—provides positive cleanliness.

In the basement—it cleans all kinds of surfaces—and provides remarkable savings by cleaning boiler tubes as illustrated above.

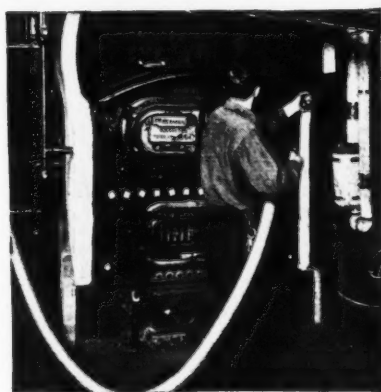
But the biggest saving is not in dollars—it is in the precious welfare of the children who attend your school. Clean air and clean rooms mean health and high morale.

School Experts and Architects agree on these points and invariably recommend Spencer.

Let us send you the facts.



Showing the use of special eraser cleaning tool.



The Central Cleaning System used for cleaning soot from boiler flues.



Even the basement is easily kept dustless.

THE SPENCER TURBINE CO.

HARTFORD, CONNECTICUT



CENTRAL
CLEANING
SYSTEMS



REPRESENTATIVES IN 50 CITIES



Clean, Smokeless, Uniform Heat AT LOWEST COST*

The advantages gained in the school room from clean heat that is free from marked temperature changes, can hardly be over-estimated. The benefits are quickly seen in more regular attendance due to fewer colds and better general health; better class room attention due to pupils being comfortable at all times; and a higher working efficiency on the part of the instructor.

Spencer Automatic Heat assures this desirable heating condition by providing smokeless, uniform heat, at a minimum of expense. The fuel used is low-cost No. 1 Buckwheat Anthracite (or small-size coke). Actual experience in hundreds of schools shows that Spencer provides Automatic Heat at The Lowest Cost.

How Spencer Magazine Feed Heaters accomplish this is explained in our new 16 page book, "Finding The Answer To The School Heating Problem." A copy is yours for the asking. Write for it, today.

SPENCER HEATER COMPANY

WILLIAMSPORT, PENNSYLVANIA

Spencer Heater Company of Canada, Ltd., Toronto, Ontario.

SPENCER
Magazine Feed
HEATERS
for steam, vapor or hot water

*New Low Prices now make purchase of a Spencer more economical than ever before. Investigate.



Open all wardrobe doors *at once!*

Many convenience features of R-W school wardrobes:

SAVE FLOOR SPACE . . . You can get these new style R-W wardrobes complete for "built-in" construction or to fit existing needs. Doors open inward without taking floor space or interfering with wraps.

VENTILATION . . . Air currents pass under and through R-W Wardrobes carrying odors, dampness and germs from clothing.

HEATING . . . Wardrobes are heated by classroom radiators, eliminating need for additional heating units.

SAFETY . . . Clothing is safe from pilfering or disturbance because wardrobes are within the classroom.

MULTIPLE ACTION DOORS . . . All wardrobe doors are connected in series by R-W hardware so that a child may

open or shut all doors by operating only one. Built to accommodate as many pupils as the room capacity.

OPERATION . . . Special designing by R-W doorway engineers assures continued quiet, easy, trouble-free operation.

CONSTRUCTION . . . R-W Compound Key Veneered flush or panel doors may be obtained, guaranteed against warping, swelling or the effects of hard usage.

INSTALLATION . . . Responsibility for complete wardrobe installation is assured by Richards-Wilcox.

WRITE . . . Send for the catalog illustrating many types of wardrobes, and call upon an R-W doorway engineer at any time for a consultation upon your doorway problem.

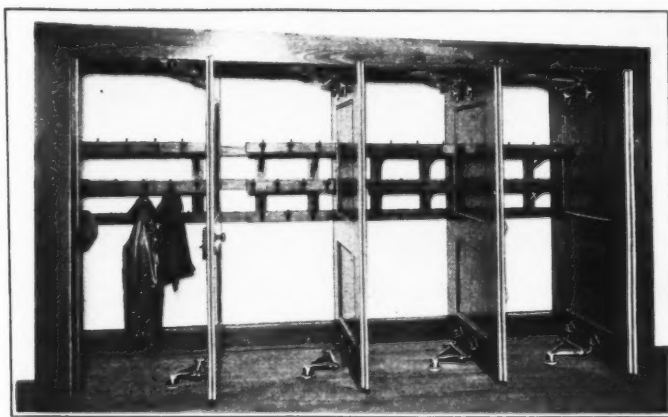


Richards-Wilcox Mfg. Co.

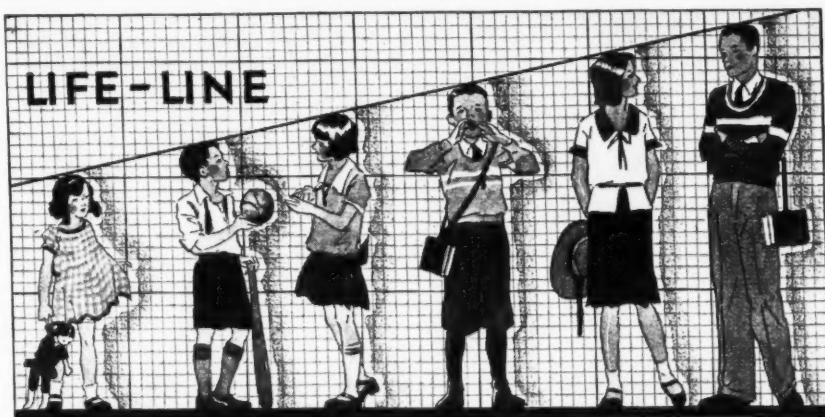
"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A.

Branches: New York Chicago Boston Philadelphia Cleveland
Cincinnati Indianapolis St. Louis New Orleans Des Moines
Minneapolis Kansas City Los Angeles San Francisco Omaha
Seattle Detroit Atlanta Pittsburgh Milwaukee
Richards-Wilcox Canadian Co., Ltd., London, Ont., Montreal, Winnipeg

OVER
50
years
1880/1931



Illustrated above: Unit type wardrobe built in series for pupils and teacher to meet any requirement.



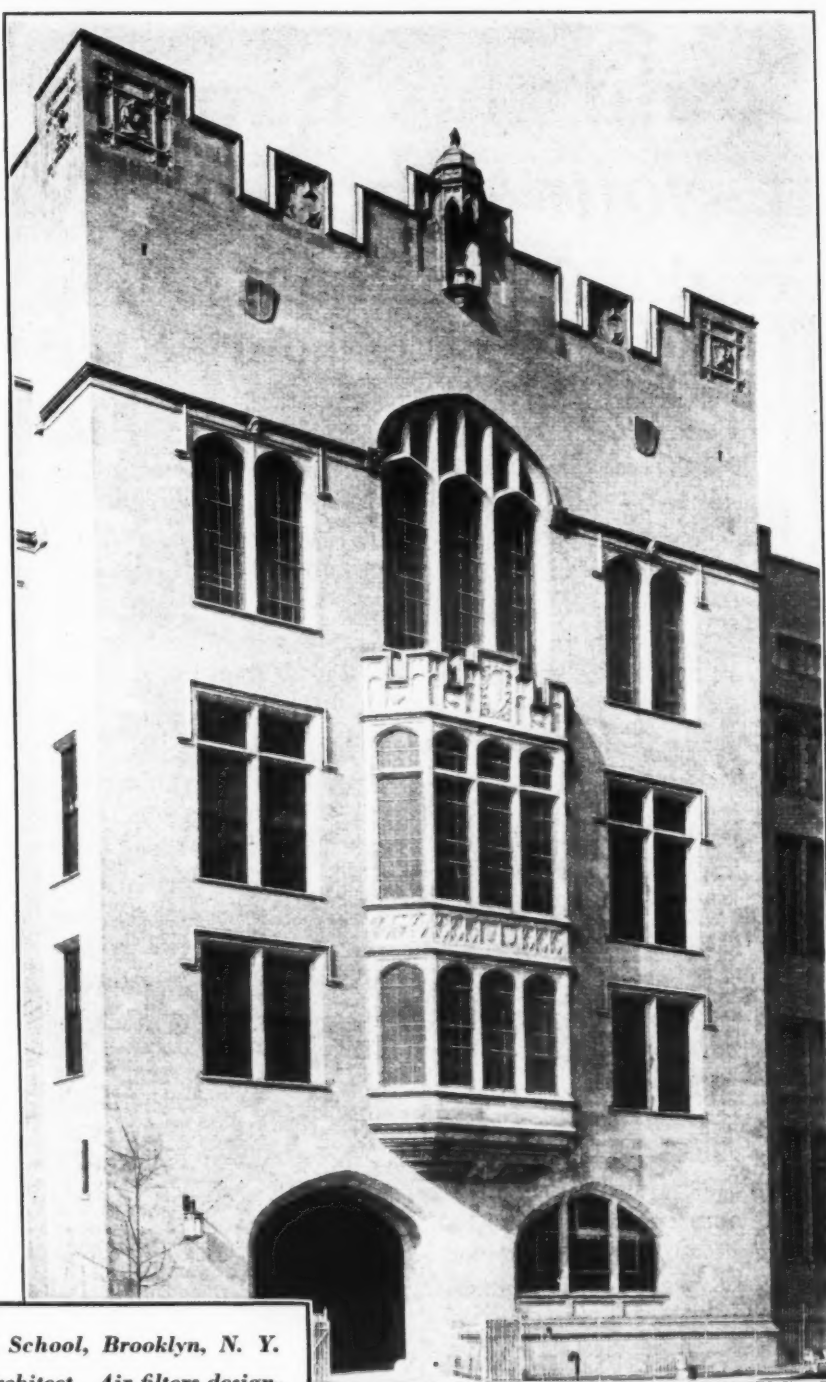
When you plan a school— You Plot the Life Line of Unseen Throngs of Children

TWO hundred days a year, from five to seven hours a day, for as many as sixteen years, the minds and bodies of the youth of your city are entrusted to your schools. No obligation is so important as that of administering the funds at your disposal for the greatest interest of the thousands of boys and girls who, through the years, will file in and out of your buildings.

You devote careful attention to designing and constructing the buildings. Adequate systems of heating and plumbing give protection from many diseases. Judicious lighting guards eyesight. Playgrounds provide healthful recreation. But unless buildings are well ventilated with *dust-free, germ-free air*, countless children will be handicapped mentally and physically by the impurities they breathe.

In rapidly growing numbers of schools and colleges, American Air Filters are assuring an abundance of fresh, outside air, thoroughly cleaned of dust, dirt and bacteria. And gratifying results follow every installation of American Air Filters. Absences are reduced. Deportment and scholarship improve. Cleaning, decorating and heating costs are cut. You can secure these advantages for *your* school. Without obligation, let us estimate for you what polluted air is costing your students and your school.

AMERICAN AIR FILTER CO., Incorporated, 108 Central Ave., Louisville, Kentucky.



Erasmus Hall High School, Brooklyn, N. Y.
Wm. H. Gompert, Architect. Air filters designed and built by American Air Filter Company.

AMERICAN AIR FILTERS



Could this happen at your school?

Get this Free Book telling you how to make showers **SAFE**

Negligence on the part of school authorities in providing Safe Shower Baths leads to trouble and often to expensive damage suits. Do not delay investigating the Powers Safety Shower Mixer and Thermostatic Water Controller.

Our book shows how Harvard University, Northwestern University, St. Louis Board of Education, Detroit School Board, and hundreds of others are using the Powers Safety Mixing Valves to prevent accidents.

The Powers Safety Shower Mixer will regulate the temperature of individual showers and keep that temperature where it is wanted. No chance of getting scalded because of pressure fluctuations in supply lines or failure of cold water supply. No slipping or falling on wet tile floors trying to escape "shots" of hot or cold water.

The Powers Thermostatic Water Controller mixes hot and cold water in large quantities and delivers at any safe temperature desired for group showers, progressive showers, etc. Absolutely scald-proof.

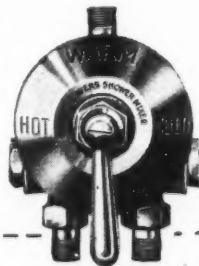
Powers Mixers save hot and cold water. They prevent steam in bath rooms, which loosens paint and plaster; and they reduce repair expense, because they have no valve seat washers on hot water inlets to wear out and need frequent replacement.

USE THIS COUPON
No obligation incurred

THE POWERS REGULATOR CO.
2721 Greenview Ave., CHICAGO

We want to make our showers **SAFE**. Send us your book on mixing valves.

Name Title
School and Address



HEALTH COMES FIRST



That is the decision of every institution installing Rundle-Spence drinking fountains...and they arrive at their decision rightfully.

First, because the sanitary features of an R-S fountain place it in a class by itself; and secondly, because, without exception, the R-S fountain prevents all users from touching their lips to the jet or nozzle.

Before you decide on the type of drinking fountain to install, write for the R-S catalog. Colors are available for any color scheme.

RUNDLE-SPENCE MFG. CO.
444 N. FOURTH ST. MILWAUKEE, WISCONSIN

RUNDLE-SPENCE
LIPS CAN NOT TOUCH THE R-S NOZZLE





Announcing the **NEW**
DOUBLE-DUTY DE LUXE
900 Series Buckeye Heatoven
with Buckeye ALL-COPPER Radiator

“The Unit That Carries the FULL HEATING LOAD”

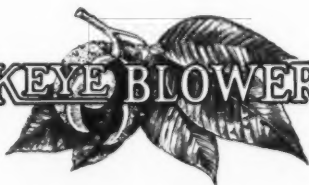
*Only 9 inches
Aisle Projection*

**ALL PIPING TRAPS AND VALVES ARE
CONCEALED WITH THE CABINET**

*Only 9 inches
Aisle Projection*

THE BUCKEYE BLOWER COMPANY

**Main Office
& Factory**



**Columbus,
Ohio**

Sales and Service Offices

ATLANTA
BOSTON
BUFFALO
CHICAGO

CLEVELAND
DALLAS
DENVER
DETROIT

INDIANAPOLIS
KANSAS CITY, MO.
LOS ANGELES
LOUISVILLE

MINNEAPOLIS
NEW YORK CITY
PITTSBURGH
RICHMOND, VA.

SALT LAKE CITY
SAN FRANCISCO
SEATTLE
SOUTH BEND

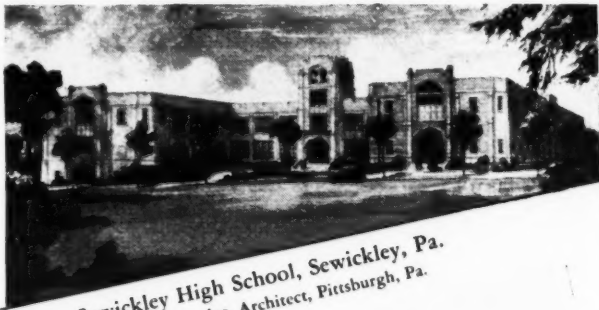
SPOKANE
ST. LOUIS
TORONTO

SCHOOLS

Forest Avenue Grade School, Ambler, Pa.
Watson K. Phillips, Architect, Philadelphia, Pa.



South West Junior High School, Battle Creek, Mich.
John D. Chubb, Architect, Chicago, Ill.



Sewickley High School, Sewickley, Pa.
Press C. Dowler, Architect, Pittsburgh, Pa.



Interior View
Roxboro Jr. High School, Cleveland Heights, Ohio
John H. Graham & Co., Architects, Cleveland, Ohio.



Modern Requirements for Classroom Windows

DRRAFTLESS ventilation, weather-tight construction, ease in operation, good shading facilities, and reversibility for safe and inside window cleaning—these are the essentials in modern classroom windows.

Williams Reversible Window Fixtures afford these advantages at a cost very little more than for the ordinary window. Send for new illustrated catalog showing widespread and repeated use.

THE WILLIAMS PIVOT SASH COMPANY

East 37th St. at Perkins Ave., Cleveland, Ohio

*For 27 years manufacturers and installers of
Reversible Window Equipment.*

**WILLIAMS REVERSIBLE
WINDOW EQUIPMENT**
Clean Your Windows from the Inside

INVEST IN HEALTH

..It Always Pays Dividends

Safeguard the health of the children entrusted in your care. Install A. P. W. Onliwon Interfolded Toilet Tissue in your school washrooms and thereby remove a common cause of rectal infection. Roll toilet papers may or may not be in a sanitary condition when bought. But as soon as a roll is placed on the wall it is exposed to dust, dirt and handling.

A. P. W. Onliwon is served from cabinets that protect the tissue from all contamination. A. P. W. Onliwon is soft and non-irritating, yet strong and absorbent. The tissue itself, plus the sanitary cabinet, make it an ideal hygienic service.

A. P. W. Onliwon Towels—the companion service to Onliwon Tissue—are also a necessary health investment. Common, repeatedly used cloth towels are dangerous, because they spread contagious diseases and infections from one pair of hands to another. A. P. W. Onliwon Towels assure an individual, clean, fresh towel every time the hands are dried. Each towel is double-folded—giving the user double strength and double absorbency.

Onliwon Cabinets are sanitary because they protect both tissue and towels from dust, dirt and other contamination. They are economical because they serve only two sheets of tissue or one towel at a time. They are neat in appearance and do away with untidy, littered floors.

Insist upon A. P. W. Onliwon—the original, sanitary washroom service. For complete information write to A. P. W. Paper Company, 1229 Broadway, Albany, N. Y.

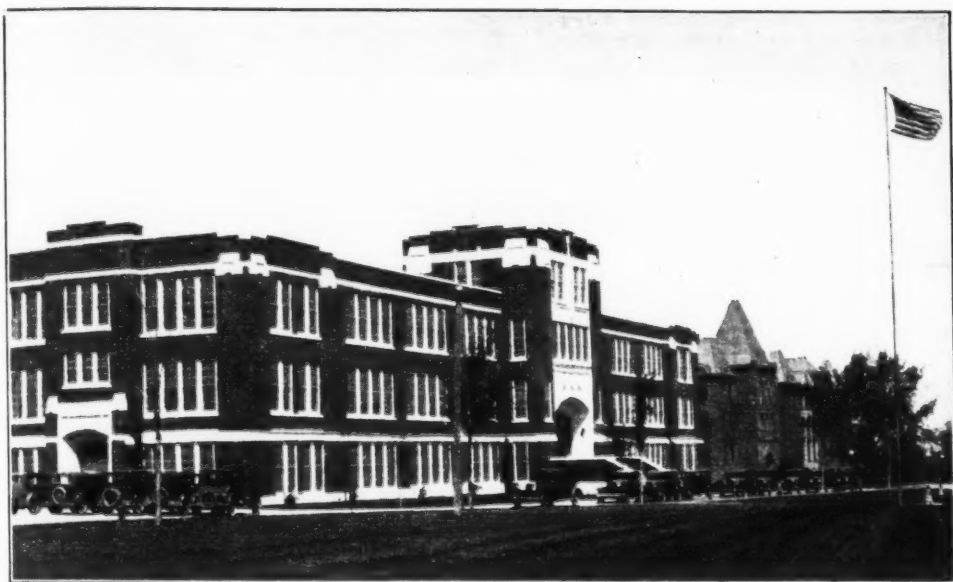


TRADE MARK REGISTERED IN U. S. PATENT OFFICE

Pioneers for Cleanliness Since 1877

EVEN WHERE SCHOOL MANAGEMENT IS TAUGHT

you'll find General Electric Refrigerators



AT Black Hills Teachers' College, Spearfish, South Dakota, you'll find the school-management equation reduced to fundamental factors of economy, efficiency, and cleanliness.

Here are no rollicking youngsters, dreading the sound of recess-ending bells. Here are only serious men and women . . . intent on making schooling their life's work. **THESE** students realize their tremendous future responsibilities for children's health that will permit no taking of chances! **SCHOOL REFRIGERATION MUST BE DEPENDABLE!!**

Dependability and economy, important qualifications for school refrigeration . . . are outstanding features of the General Electric Refrigerator. That's why Yale, John Hopkins, and other nationally famous schools are General Electric equipped.

The simple current-saving mechanism is hermetically sealed in steel and permanently oiled . . . requires no attention . . . maintains constant refrigeration temperatures that definitely elimi-

nate spoilage expense . . . keep food fresh and wholesome. The sturdy, roomy cabinets are built to last! The modern Monitor Top design adds beauty to school kitchens and cafeterias and every General Electric Refrigerator is guaranteed for 3 years against service expense.

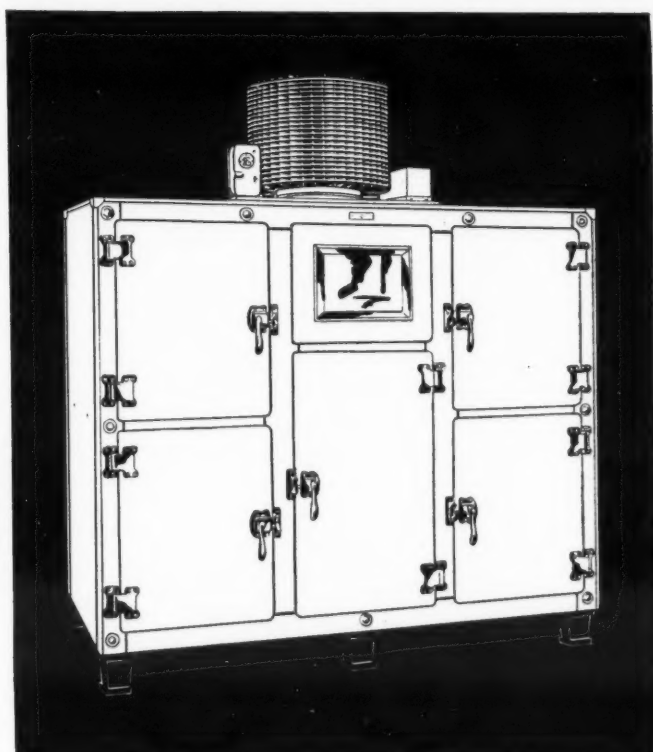
Have a General Electric Specialist call today. Learn how General Electric Refrigeration protects health and working efficiency of pupils and teachers . . . how it protects school budgets with its economical operation . . . how its dependability erases refrigeration worries. Call your local dealer or write us.

General Electric Company, Electric Refrigeration Department, Section CK 9, Hanna Building, 1400 Euclid Avenue, Cleveland, Ohio.

Join us in the General Electric Program, broadcast every Saturday evening, on a nation-wide N. B. C. network.

GENERAL  ELECTRIC
COMMERCIAL REFRIGERATORS

DOMESTIC AND APARTMENT HOUSE REFRIGERATORS—ELECTRIC WATER COOLERS



School Architects Directory

RALPH E. ABELL CO.

176 W. Adams Street
Chicago, Illinois
Architects and Engineers
Educational Buildings

FRANK IRVING COOPER CORPORATION

ARCHITECTS ENGINEERS
SPECIALIZING IN SCHOOLHOUSE PLANNING
47 Winter St., Boston, Massachusetts

ROBERT R. GRAHAM

REGISTERED ARCHITECT
States of New York—New Jersey—Pennsylvania.
Member—N. Y. Chapter American Institute of Archts.
Complete Architectural Service on School Bldgs.
—Consultations—
25 Prospect St. Middletown, N. Y.

S. ARTHUR AXTENS, A.I.A.

ARCHITECT
School Building Specialist
509—17th Street DENVER, COLO.

FLOYD E. DOUGHERTY

ARCHITECT
35 North Dearborn St., Chicago, Ill.

FRANK B. GRAY

ARCHITECT
School Specialist
73 S. LA SALLE ST. AURORA, ILL.

J. WILLIAMS BEAL, SONS

ARCHITECTS
185 DEVONSHIRE STREET
BOSTON, MASSACHUSETTS

Architectural Service

The evolution of school architecture has brought to the fore the specialist who approaches his task from the standpoint of the educational objectives to be pursued within the structure. He responds to the several considerations which necessarily shape the orientation and equipment that will serve best the kind of school wanted. Again, environment and location may play an important part in shaping the type of structure required.

A group of architects specializing in school work are taking the initiative in advising school authorities in the matter of selecting architectural service. The failures in the school-building field, and they are found in all sections of the country, are in the main due to the employment of architects who have not made a special study of school-house planning.

There was a time when the planning and construction of a schoolhouse had its beginning with the architect. Now the planning

GUILBERT & BETELLE

Architects
Chamber of Commerce Building
Newark, New Jersey

F. E. BERGER R. L. KELLEY

ARCHITECTS
Specialists Educational Buildings
LINCOLN BUILDING, CHAMPAIGN, ILL.

HACKER & HACKER

ARCHITECTS
SCHOOL SPECIALISTS
Fort Lee Trust Building, Fort Lee, N. J.
at the Plaza — Hudson River Bridge to New York City.

BONSACK & PEARCE INC.

WILL MAKE SURVEY OF YOUR NEEDS
Complete Architectural & Engineering
Services by School Specialists
411 Olive Street St. Louis, Mo.

HAMILTON, FELLOWS & NEDVED

ARCHITECTS AND ENGINEERS
814 Tower Court, Chicago
Members of the American Institute of Architects

HARRY E. BOYLE & CO.

Architects and School Specialists
EVANSVILLE, IND.
Twenty Years Practical Experience
Registered in Indiana, Illinois, Tennessee

HAYNES & MASON

SCHOOL ARCHITECTS
PARK BLDG. CAPITOL BLDG.
FITCHBURG, MASS. HARTFORD, CONN.

CLARENCE WILSON BRAZER

REGISTERED ARCHITECT
Advisor to National Advisory Council on
School Building Problems
421 Market St. 232 Madison Ave.
Chester, Pa. New York City

MARTIN J. GEISE, Architect

I make a Specialty of Designing School Buildings in
Illinois, Iowa, and Missouri. Over 20 Years Experience.
QUINCY, ILL. KEOKUK, IOWA
AND
8th and Main Sts. State Central Saving Bank
Building, 6th and Main

THOMAS K. HENDRYX, A.I.A.

ARCHITECT
Bradford, Penna.
Registered in Pennsylvania and New York

CARL W. CLARK A. I. A.

Savings Bank Building Cortland, N. Y.
Architect
Consultant and Plan Advisor—Mr. Frank H. Wood,
former Director, Division of School Buildings and
Grounds, New York State Department of Education.
New York Office—Suite 1432-33 W. 42nd St.

Bertram E. Geisecke A. Watkins Harris

GEISECKE & HARRIS
ARCHITECTS
SPECIALIZING IN SCHOOL DESIGN
207 W. 7th St. 513 Second National Bank Bldg.
AUSTIN, TEXAS HOUSTON, TEXAS

Wm. G. Herbst, A. I. A. E. O. Kuenzli, A. I. A.

HERBST and KUENZLI
ARCHITECTS
Educational and Public Buildings
1249 North Franklin Place Milwaukee, Wis.

COFFIN & COFFIN

ARCHITECTS
522 FIFTH AVENUE
NEW YORK CITY

WM. H. GOMPERT, A.I.A.

Former Architect and Superintendent
School Buildings, New York City
Consultant and Professional Advisor
To School Boards, Superintendents and Concerns
Manufacturing Materials and Equipment
for School Buildings
101 Park Ave., N. Y. C.

WARREN S. HOLMES COMPANY

Architects and Engineers
Specializing in School and College Buildings
CHICAGO LANSING, MICHIGAN BOSTON

School Architects Directory

ROBERT M. HYDE

ARCHITECT

8 So. Dearborn St. Chicago, Ill.

PERKINS, CHATTEN & HAMMOND
SCHOOL ARCHITECTS
MURRAY A. DALMAN,
EDUCATIONAL CONSULTANT

160 North LaSalle Street Chicago, Illinois

A. W. E. SCHOENBERG

ARCHITECT

OLEAN, N. Y.

WM. B. ITTNER, Inc.

Fellow, American Institute of Architects

Superior Architectural and
Engineering Service Rendered20th Floor, Continental Life Building
3615 Olive St., St. Louis, Mo.
C. Godfrey Poggi

and

William B. Bragdon
ARCHITECTS

Elizabeth, New Jersey

JOHN A. SCRIBBINS

ARCHITECT

GLENCOE, ILLINOIS

Specializing in Educational Buildings

331 Park Avenue Phone Glencoe 224

LEE & HEWITT

MEMBERS, AM. SOC. C. E., MEMBERS, A. I. A.

152 Market St. 53 Park Place
PATERSON, N. J. NEW YORK, N. Y.Specialists in School Design,
Construction and Equipment

of a school structure has its inception and beginning with those who are expected to labor within its walls. The judgment of teacher and principal, of superintendent and school-board member, enters into the preliminaries in close cooperation and ably directed by the professional service of the school architect.

And the selection of the architect is no longer a matter of chance but invariably based on the professional standing and experience of the architect as presented in the pages of the AMERICAN SCHOOL BOARD JOURNAL and conveniently determined by reference to the SCHOOL ARCHITECTS DIRECTORY.

As a result of all this forethought, planning and presentation of the best in school architecture, the modern schoolhouse meets in the highest degree the purpose for which it is reared. Its being is not the creation of a day. It embodies the accumulated experience of many years and many minds. It has become a distinctive achievement because the school authorities have chosen the architect who knew how to plan and build a school, and because the architect had the ambition to excel.

ERNEST SIBLEY & GEORGE M. CADY
ARCHITECTS

Palisade, N. J. Litchfield, Conn.

HENRY R. HOWLAND
CONSULTING ENGINEER

101 Park Ave., New York City

Joseph C. Llewellyn
F.A.I.A.Ralph C. Llewellyn
M.W.S.E. and A.I.A.
JOS. C. LLEWELLYN CO.
ARCHITECTS and ENGINEERS
38 S. Dearborn St.
Chicago
STARRETT AND VAN VLECK
ARCHITECTS
Equitable Life Building
393 Seventh Avenue, New York, N. Y.Edgar E. Lundeen, A.I.A. Philip R. Hooton, A.I.A.
Archie N. Schaeffer, A.I.A. Edwin Roozen
Registered Architects
Lundeen, Hooton, Roozen & Schaeffer
ARCHITECTS
7th Floor Peoples Bank Building
BLOOMINGTON, ILLINOIS
MALCOMSON and HIGGINBOTHAM
and TROUT

A. W. Balle, Associate

ARCHITECTS and ENGINEERS

6th Floor, Malcomson Bldg. Detroit, Michigan

TOOKER & MARSH
ARCHITECTS

101 Park Ave. New York City, N. Y.

CHARLES L. TROUTMAN
Registered Architect and Engineer
School Specialist

410 American Trust Building Evansville, Ind.

J. MANDOR MATSON

ARCHITECT

ROOMS 528-538 BAKER BLOCK
RACINE, WISCONSINIRVING K. POND, C.E., EDGAR MARTIN, A.I.A.
F. and Past Pres. A.I.A. M. Am Soc. C.E.
ALLEN B. POND, F.A.I.A. ALBERT L. LLOYD A.I.A.
POND & POND, MARTIN and LLOYD
ARCHITECTS

180 North Michigan Avenue, CHICAGO, Ill.

HENRY H. TURNER, A. I. A.
SCHOOL ARCHITECTS

Established 1909

Michigan Trust Building

GRAND RAPIDS, MICHIGAN

McGUIRE & SHOOK
ARCHITECTS
Specialists in Design of Educational Buildings
Consulting Service to School Officials

1400-1401-1402 Fletcher Trust Building

INDIANAPOLIS, INDIANA

H. D. Rawson A.I.A.
H. Clark Souers A.I.A.
Oren Thomas A.I.A.
PROUDFOOT, RAWSON, SOUERS
& THOMAS

School Architects

Hubbell Building Des Moines, Iowa

H. J. VAN RYN, A.I.A. G. J. DE GELLEKE, F.A.I.A.

VAN RYN & DE GELLEKE
ARCHITECTS

Fourteen Years-Architect School Board, Milwaukee, Wis.

152 WISCONSIN AVE. MILWAUKEE, WIS.

W. H. McLEAN

ARCHITECT

713 TREMONT TEMPLE, 88 TREMONT ST.,
BOSTON, MASS.Specialist in Designing and Planning of
School Buildings
RASMUSSEN & WAYLAND

ARCHITECTS

36 WEST 47th STREET
NEW YORK CITY
WELLS AND HUDSON

ARCHITECTS & ENGINEERS

Hanover - New Hampshire

The natural close grain of Alberene Stone prevents the "dishing" of stair treads



Wearing quality of selected hard stone *proven* under severe tests

ALBERENE STONE Stair Treads are fabricated from slabs selected for their extreme hardness and density. This is one reason why chipping, scaling and "dishing" will not occur during the life of the building in which they are installed. Equally non-slipping, whether wet or dry, Alberene Treads insure safety for hurrying feet. Being practically non-absorbent, their cleaning is a simple matter.

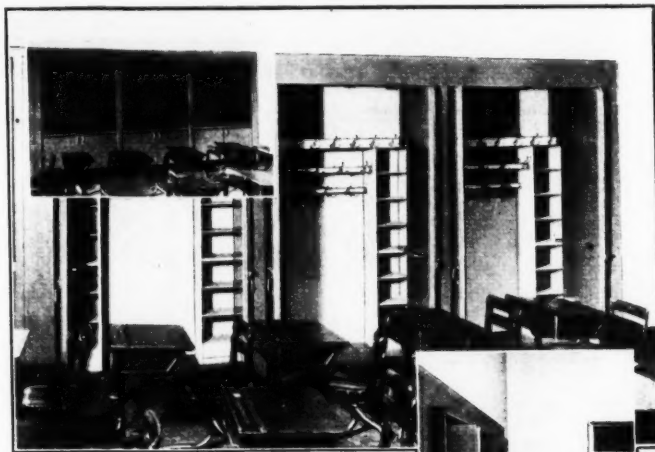
From every angle (including upkeep) Alberene has proven its value under constant and severe traffic in schools and other public buildings.

ALBERENE STONE COMPANY
153 West 23rd Street, New York

Branches at Chicago :: Pittsburgh :: Cleveland :: Boston
Philadelphia :: Richmond :: Newark, N. J.
Rochester :: Washington, D. C.
Quarries and Mills at Schuyler, Virginia

ALBERENE STONE

For Safe Durable Stair Treads



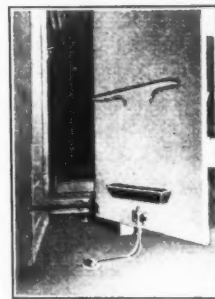
Large photo shows disappearing door type Wilson Wardrobes open. Top inset shows doors closed, fitted with blackboards. Lower inset shows doors open, projecting only 2 1/2" into aisle.

Features of Wilson School Wardrobes That Save Space and Money—

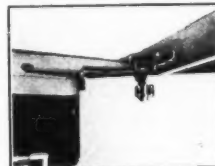
Pictures show installation of Wilson Hygienic School Wardrobes (disappearing door type) in South Norfolk High School, South Norfolk, Va.. W. O. Sherman, Architect, J. W. Hudson, Jr., Contractor.

These wardrobes eliminate space and cost of cloak rooms. May be installed in corridors or rooms. Fronts operate easily and out of the way, whether open or closed, in both the disappearing door type and the rolling door type. Provided with blackboard surface if desired. Wilson Hygienic School Wardrobes permit smaller school buildings without loss of seating capacity, thereby lowering construction costs.

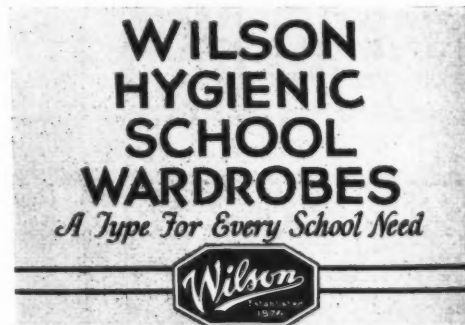
Write for Catalog No. 14-W



Umbrella racks with drip pan may be attached to disappearing door type wardrobes.



Detail of top track showing ease and sturdiness of operation. All hardware made in our plant.



The J. G. Wilson Corporation

11 East 38th St., New York—Box 1194, Norfolk, Va.
Offices in All Principal Cities

OVER 50 YEARS IN BUSINESS

Back to School They Come



Students • Teachers and SINGER SERVICE

SINGER Educational Service Free to Schools and Colleges..

The Singer Educational Service is provided solely to facilitate the teaching of machine sewing and to make possible in the home, through the medium of our schools and colleges, more extensive and profitable use of the modern sewing machine. The service is furnished without cost or obligation of any kind to the school using it. The service consists of the following:

An intensive course, for sewing teachers, of practical machine operation and adjustment, varying from one to ten periods of one hour to one day each, according to local needs and conditions.

Free textbooks for teachers taking the course.
Free loan of machines to teachers for practice work.

Free materials, to be used by teachers in practice work.

Free manuals on machine sewing for pupils of sewing classes.

Free wall charts, illustrating threading of machine and bobbin.

A demonstration lesson for sewing classes when the intensive teachers' course has been completed.

TO thousands of schools and colleges where machine sewing is taught, the annual return of Singer Service is a familiar event. Skilled representatives of the Singer Sewing Machine Company come to inspect and adjust machines and put them in perfect condition for classroom use. They come, too, to make certain that every facility is provided for carrying on the year's program of sewing instruction.

If yours is one of the institutions enjoying the benefit of Singer Educational Service, your equipment may already have been inspected. If not, simply send word to the nearest Singer Shop that you are ready. And remember that, at any time throughout the school year, a courteous efficient service representative in your own community is waiting, at the tinkle of the telephone, to respond to your call.

This annual and continued inspection of equipment is but one phase of the broad service placed at your disposal by our Educational Department. For many years it has been co-operating with school authorities in planning and conducting instruction in machine sewing. It can assist you in laying out sewing classrooms to accommodate efficiently the largest possible number of pupils. It has plans which will solve your seating and lighting problems, eliminate repair requisitions and prevent damage to equipment. Possibly most important of all, it has a program which will develop a new interest in sewing for both teachers and pupils.

Singer Educational Service is definitely fitted in each case to your individual school problems. A representative of our Educational Department will be glad to call upon request.

SINGER SEWING MACHINE Co., INC.

EDUCATIONAL DEPARTMENT, ROOM 1314 • SINGER BUILDING • NEW YORK, N. Y.

SINGER SEWING MACHINE COMPANY
Educational Department, Room 1314
Singer Building, New York, N. Y.

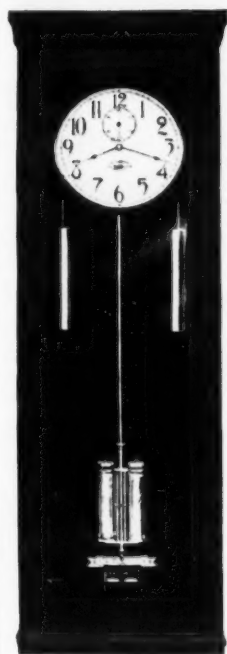
Please have a representative call and
tell us about your Educational Service.

Name.....

School Address.....

City..... State.....

MORE TIME FOR INSTRUCTION



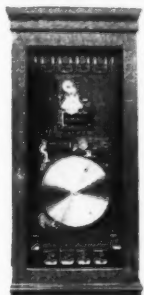
INTERNATIONAL MASTER CLOCK



INTERNATIONAL CLASS ROOM CLOCK



INTERNATIONAL CORRIDOR GONG



INTERNATIONAL PROGRAM CABINET

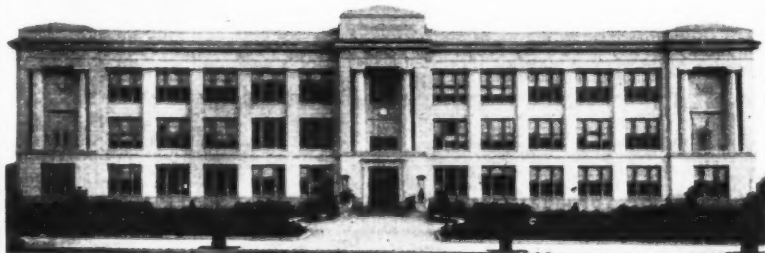
.... because there's no time wasted when your school is
INTERNATIONAL EQUIPPED

When the school schedule has once been entrusted to an International Supervised Electric Time and Program System, pupils get the maximum amount of instruction time.

Wasted minutes due to non-supervised clock irregularities—the resultant confusion, shortened periods, disrupted discipline and the like are entirely eliminated. Periods become standard—classes assemble and are dismissed precisely on schedule. Teachers give their undivided attention to instruction without having to keep one eye on the clock. Bells ring exactly at the time specified—and in perfect agreement with every wall clock.

No "step-ladder maintenance" is ever necessary because the Master Clock automatically "checks up" on the entire system once each hour—and *proves the accuracy of each unit*. Any clock that may have become slow or fast because of some outside interference simply aligns itself.

For more detailed description or a demonstration communicate with the International office in your vicinity. Offices are listed in the phone directories of all principal cities.



East End Junior High School, Richmond, Va.

INTERNATIONAL
SUPERVISED

INTERNATIONAL BUSINESS MACHINES CORPORATION

International Time Recorders and Electric Time Systems
International Electric Tabulating and Accounting Machines
Dayton Moneyweight Scales and Store Equipment
International Industrial Scales

GENERAL OFFICES
270 Broadway
New York, N. Y.



Branch Offices and
Service Stations in
All Principal Cities



"MERRILY WE ROLL ALONG"



THEME SONG OF THE NEW STANDARD ROTARY DUPLICATOR

There's music in the hum of the new Standard Rotary Duplicator as it whirls through its work and there's rhythm in the steady even flow of copies it turns out—clear, flat, tidy looking copies, 50 of them by the minute and 200 from a single original.

Ease—smooth operation—genuine, time saving efficiency—that's the story of the Standard Rotary. For this radically different gelatin duplicator involves no stencils, no stencil cutting and no inking.

SPECIAL STANDARD FEATURES

Over 200 clear, sharp copies from one original—typed, written or drawn.

Uses plain bond paper.

Four colors reproduced in one operation.

Gelatin films instantly interchangeable—can be used over and over again, hence the extremely low cost.

Let us send you complete information applicable to your own duplicating requirements.

Write today—No obligation

Standard
MAILING MACHINES CO.
REVERE ROAD • EVERETT • MASSACHUSETTS

OFFICES IN ALL THE PRINCIPAL CITIES AND FOREIGN COUNTRIES



1 D E S K

• that serves the modern classroom in 6 important ways

THE amazing advantages of the "American" All-Purpose Universal Desk have won the enthusiastic approval of Superintendents, Principals, Trustees of schools everywhere. For beyond its stamina, its sensible, practical, durable construction . . . are features of such obvious merit that with its introduction at the N. E. A. Department of Superintendence Meeting in Detroit, it became of paramount importance as an example of modern equipment for progressive, modern schools.

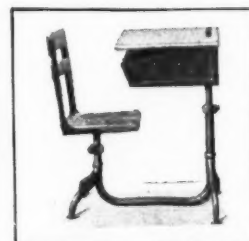
Please note carefully the photographic illustrations. Please read the 6 distinct ways this 1 desk serves. See how with posture-correctness the "American" All-Purpose Universal Desk makes other valuable contributions to the proper physical development of school children.

Specialized experience . . . exacting research . . . meticulous experiment developed this desk. It is ready now for *your* school . . . a fine example of American Seating Company craftsmanship, and ingenuity.

When you seat your school . . . install this modern unit. Give the children placed in your charge the outstanding advantages this desk brings.



1 Book Support—A special book support extension—quickly converting the standard model to an eye conservation desk.



2 Level Top—A simple device attached below the lid holds it at a level. Especially desirable for group study or socialized recitation.



3 Typewriter desk—A tilting top for use in the typewriting department. Turn the top down—and it's set for study or work.



4 Comfort for Cripples—Various attachments purchased separately as required, to fit the physical fault of the pupil.



5 Study Hall Top—In place of the standard top, a top without book receptacle can be substituted. Ideal for high school and study hall purposes.



6 Standard Type—For all 'round school use. As indicated in illustrations, various adjustments, attachments and devices quickly adapt it to any use.

FREE Poster on posture furnished for each classroom. Just send the coupon . . . and with it we will mail you several authoritative booklets on posture and seating. 62,000 of these posters have been sent to schools the country over. Size 17 1/2 by 25 inches—printed in 3 colors—it graphically shows children why they should sit erect. Hang one in every classroom in your school. Please use the coupon.

AMERICAN SEATING COMPANY, Grand Rapids, Michigan

Please send me, free and without obligation, a copy of your Posture Poster on correct sitting. Principals and superintendents will be supplied with a poster for each room, on request. Please indicate the number of classrooms.

Name _____ Address _____
Position _____ (Indicate here whether you are Superintendent, Principal or Teacher)

☐ Number of classrooms

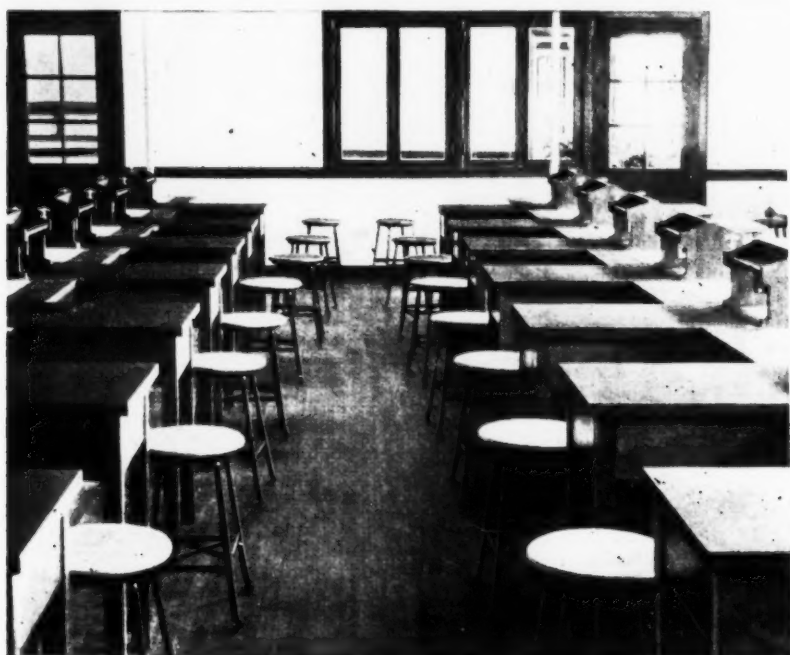


American Seating Company

Makers of Fine Seating for Schools, Churches and Public Auditoriums

General Offices: Grand Rapids, Michigan

Branches in All Principal Cities



Laboratory and Drafting Room Stools for the Modern School

**Proven
Through
Years of
Actual Use
In Leading
School
Laboratories
As the
Ideal Stools
for
Economy,
Durability,
Permanence**



No. 100 Laboratory Stool



No. 251 Stool



No. 200 D.S. Stool

NO. 100 LABORATORY STOOL

Seat of hardwood, 13½" diameter, concave and comfortable. Finished in light oak, dark oak, school furniture brown or mahogany—optional choice. Frame of steel. Construction is riveted throughout. The stool feet may be had in three styles: with regular ball turned steel foot, formed as part of the leg; or, with rubber crutch tip; or, with our new design noiseless flat-bottom glide. Steel frame finished in olive green or school furniture brown enamel, optional choice. Heights available: 18", 20", 22", 23", 24", 26", and 27". (Other stool patterns available in heights up to 36".) Same stool with Removable Back is Series No. 110.

Write for Catalog and Prices.

ANGLE STEEL STOOL COMPANY
PLAINWELL ~ MICHIGAN

Save with Steel



Before you worry about budgets

FIND OUT ABOUT IMPERIAL TEACHERS' DESKS
. . . AND THE DOUBLE ECONOMY THEY EFFECT

IN THIS day of curtailed appropriations and increased demands . . .

When every equipment-dollar must deliver a larger return . . .

. . . budget-minded school executives are turning to Imperial Teachers' Desks — and to Imperial's double measure of economy.

First of all, Imperial Teachers' Desks answer the demand for staunch quality at moderate cost. Four grades are available for every purpose, and the price you pay depends largely on the grade you select.

Secondly, durable construction and selected materials are combined in Imperial Teachers' Desks to give you long life, trouble-free service and low ultimate cost-per-year.

Before you make any unnecessary sacrifices in quality for the sake of economy, find out about Imperial Teachers' Desks, Library and Office Tables and Chairs. A copy of the Imperial catalog will be sent to you through our nearest distributor immediately on request.



IMPERIAL DESK COMPANY
EVANSVILLE • INDIANA

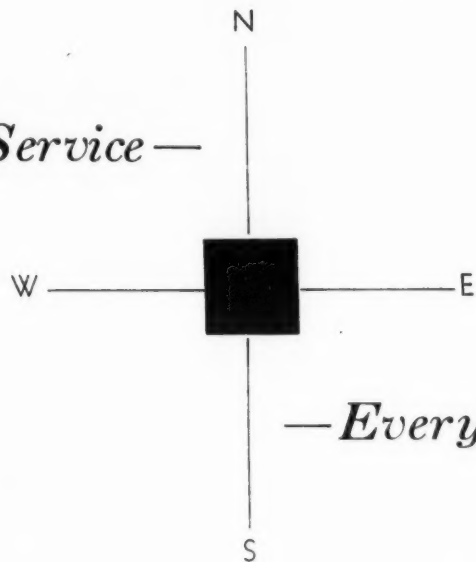
PEABODY

AGAIN EXCELS



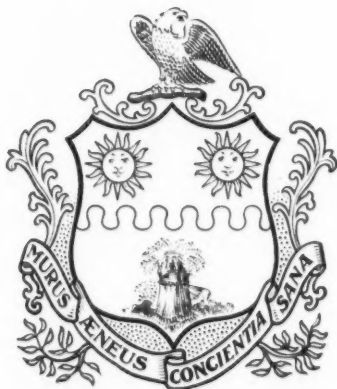
No. 260

Service —



— Everywhere

In line with a successful policy practiced for thirty years, PEABODY'S have again improved upon a type of furniture for schoolroom use. The unit desk and chair #260 pictured above is the latest improvement. A true ball bearing seat swivel, a positive, yet simple adjustment for seat and desk height, a lifting lid that will not slam, and special broad flat feet that will not mar soft texture floors, are a few of the features upon which Peabody's have made improvements in this type of desk.



This latest addition to the already complete line of seating has been made after a careful and extensive study of schoolroom needs. With this type special attention can be given each pupil in so far as posture, light and special habits are concerned.

*Write for catalog
and name of nearest distributor*

The PEABODY SEATING CO.
NORTH MANCHESTER, INDIANA, U. S. A.

A NEW STEEL FOLDING CHAIR WITH FULL BACK REST



Out of our many years of experience in designing and manufacturing steel folding chairs, comes the perfect solution to the full back rest problem.

Without sacrifice to quality, material or workmanship, we have perfected the only steel folding chair with full back rest—and it costs no more than chairs without this advantage.

Vikings provide solid comfort, correct posture and prevent annoyance from those seated in rear rows. Children any size may be seated comfortably and safely because of the full, rigid back.

How the VIKING Folds

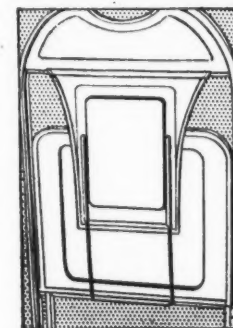
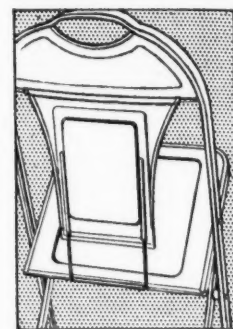
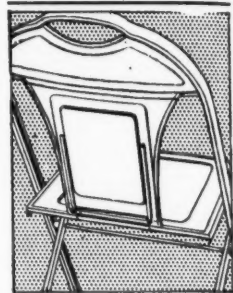
Illustration at upper right shows back view of chair in position to receive occupant. Center picture shows seat partly raised for folding—notice how compactly the guides are constructed to telescope when folded. Lower picture illustrates the VIKING completely folded, leaving the two guides flat against the seat. The construction is patented—only the Viking 200 has it. No triggers, locks or springs to get out of order or to need replacing.

Perfect Balance

The Viking 200 has perfect balance. It will not tip when children slide to the edge of the seat nor with the shifting of excessive weight on the seats. This feature is invaluable for schools and has in itself been responsible for many adoptions of Viking Chairs.

Write for complete information

MAPLE CITY STAMPING CO.
PEORIA, ILLINOIS



COMBINED WOOD AND STEEL *Stronger Than Any Other Chair Made!*



SOLID KUMFORT AND
PRESS-TOE LOCK

**FOLDING
CHAIRS**
*for Every
Purpose!*



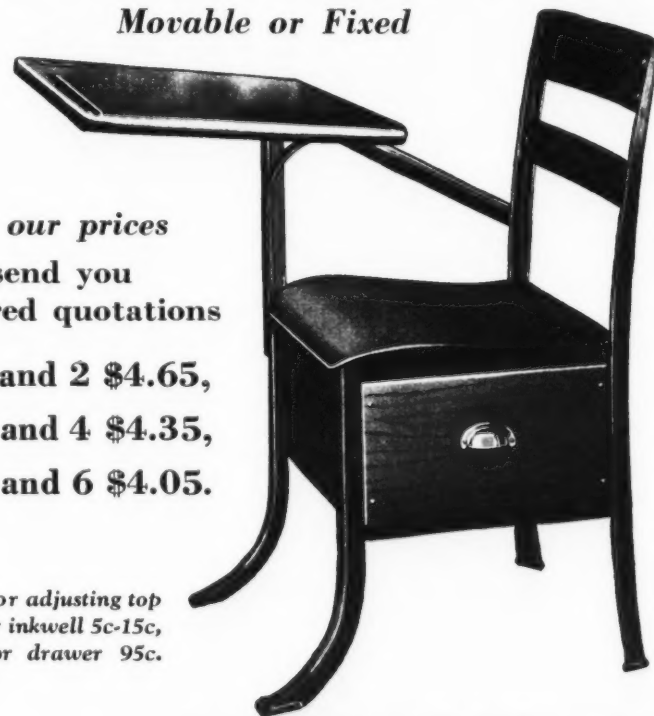
Ideal for School Auditoriums and Classrooms. Splendid Appearance, *Finest Quality Throughout*. Outlast and Out-perform Any All Wood or All Steel Chair Made. Write for Folder. Also Ask About Our Tab-L-Arm Folding Classroom Chairs.



LOUIS RASTETTER & SONS CO.
1405 WALL ST., FORT WAYNE, IND.

Standard Indestructo Chair Desks

Movable or Fixed



Note our prices

Let us send you
delivered quotations

Nos. 1 and 2 \$4.65,

Nos. 3 and 4 \$4.35,

Nos. 5 and 6 \$4.05.

Extra for adjusting top
30c; for inkwell 5c-15c,
and for drawer 95c.

COLUMBIA
SCHOOL SUPPLY CO.
INDIANAPOLIS



No. 181: NATIONAL ADJUSTABLE PEDESTAL DESK: as the picture shows, is beautiful in appearance, hygienic in design, and made with particular attention to line and proportion. Has form-fitting back and seat, providing most comfortable back support, whatever position pupil assumes. Has wide range of adjustment. Can be adjusted with pupil seated. Has every other feature desired.



No. 40: NEW NATIONAL ADJUSTABLE MOVABLE CHAIR DESK: Back has one wide form-fitting support, for pupil's comfort in any position. Adjustable by pupil while in seat. In addition, has many other advantages, which the picture here alone suggests.



No. 131: NATIONAL PEDESTAL TABLET ARM CHAIR: especially adapted to use in lecture rooms, study rooms, high school and college recitation rooms. Comes with rigid pedestal standard, as illustrated; or with movable base.



No. 141: NATIONAL SEPARATE DESK AND CHAIR: Seat has deep curve, of saddle type; and full back support. Maximum comfort. Roomy book box and desk top. Furnished in either fixed seat (as shown here) or swivel style.



No. 50: NATIONAL STEEL FRAME MOVABLE DESK AND CHAIR. Seat and book box adjustable up and down. Adjustment range ample for any grade. Broad bearing base surface — prevents denting, scratching or marring of floor or floor covering.



Install *Known* School Desk Value . . . And Avoid The Results of Error

School desk values show up *after* the purchase and installation are made . . . with disappointing deficiencies or perfect satisfaction, as the case may be. National School Desks . . . proven correct in design, construction and every hygienic necessity . . . are a guaranteed satisfaction, and are established against defect . . . the known value, and not a new idea nor untried theory only. Protect your after-results by selecting National School Desks . . . almost an unlimited variety of styles for every requirement, with expert engineering service in proper room lay-out and seating arrangement, etc. Write now for the complete National catalog, and other details desired.

NATIONAL SCHOOL EQUIPMENT COMPANY

191 Piere Street

PORT WASHINGTON, WISCONSIN

NATIONAL School DESKS
Famous for Comfort

No more costly Corrosion



This air-tight, non-evaporating, dust-proof inkwell saves 75% of your annual ink bill

Corrosion will not affect the Sengbusch Self-Closing Inkstand, the only all-hard-rubber inkwell on the market. Gone are the expensive ink bills and the high replacement costs chargeable to corrosion.

No more mud! The Sengbusch inkwell always supplies clean, fresh ink to the pen. Ink savings alone pay the cost of these modern inkwells within two years.

No breakage! Protects desks, books and clothes.

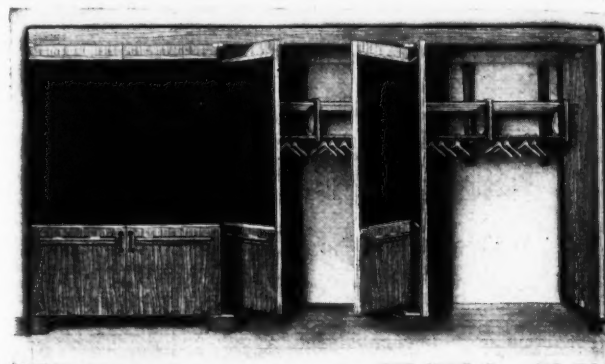
Extremely simple to install. Instructions for re-boring desks now in use, together with efficient re-boring tool which janitor can use with ease, gladly supplied upon request.

Superintendents, Principals, Teachers—write for detailed information about the complete Sengbusch line of desk necessities: Self-Closing Inkstands, Dip-Aday Desk Sets, Ideal Sanitary Moisteners, No-Over-Flo Sponge

Cups, Kleradesk.

Sengbusch

SELF-CLOSING INKSTAND CO.
918 Sengbusch Building, Milwaukee, Wis.



EVANS
"Vanishing
Door"
WARDROBE

This wardrobe

is made for plaster ends, backs and ceilings. No jambs nor trim required; only doors, fillet, hinges and interior of racks and garment hangers completing the installation.

Class B-B
Without jambs
or trim

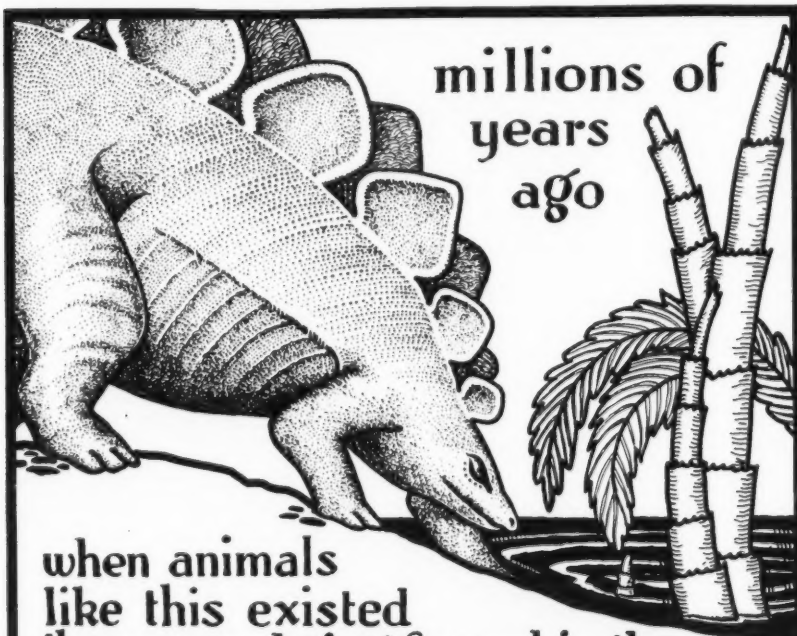
The hinges used are of heavier construction than any previous manufacture and are unconditionally guaranteed to last the life of the building. There are no noisy tracks nor rollers to stick or bind, nor intricate mechanism to get out of order.

"Vanishing Door" wardrobes are furnished complete in the knockdown. All woodwork is cut to size and only needs nailing in place. The hinges are easier to put on than common butt hinges. The cost of installation is small.

Catalog "K" fully illustrates many types of school wardrobes, with specifications and price list. Write for a copy.

W. L. EVANS

WASHINGTON, INDIANA, U. S. A.



when animals
like this existed
there were being formed in the sea
deposits from which are now made

"HYGIEIA"

REG. U. S. PAT. OFF.

CHALK CRAYONS

"HYGIEIA" makes an exceptionally white mark, is easily erased and keeps your blackboards in perfect condition.

WRITE FOR OUR BOOKLET ON THE CARE OF BLACKBOARDS. COMPLIMENTARY.

THE AMERICAN CRAYON COMPANY
HOME OFFICE AND FACTORIES



334-334 HAYES AVE., SANDUSKY, OHIO

NEW YORK OFFICE 300 FIFTH AVENUE DALLAS, TEXAS · SANTA FE BUILDING
SAN FRANCISCO · 110 NEW MONTGOMERY STREET



Class of 1936

When Vul-Cot "graduates" from its five year guarantee it will still be a freshman in age and appearance, ready for another and another five years of school or college. It's made, you know, of genuine hard vulcanized fiber with solid side and bottom that keep even chalk-dust in the basket and off the floor. Never chips, cracks nor dents. . . . No wonder you find Vul-Cot in 78 per cent of America's schools!

NATIONAL VULCANIZED FIBRE CO., WILMINGTON, DEL.

VUL-COT

-the national wastebasket

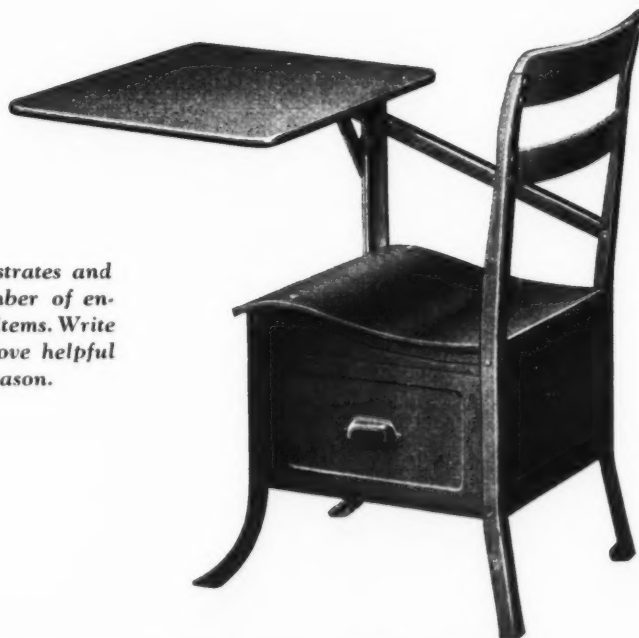


Prompt Shipment of those Last-Minute Equipment Needs

IN spite of one of the biggest seasons in our history we have managed to maintain adequate stocks of practically all items contained in our wide line of seating equipment. Hence, if you have deferred buying, or at the last minute have discovered an urgent need for certain "fill-ins" or additional equipment, don't be perturbed. Just write, wire or telephone your requirements and they will be shipped pronto!



Our new catalog illustrates and describes quite a number of entirely new and unique items. Write for it now. It will prove helpful in planning for next season.

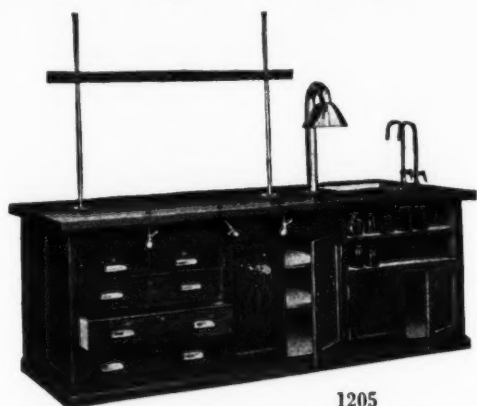


STEEL FURNITURE CO.
GRAND RAPIDS, MICHIGAN

PETERSON

Laboratory and Library Furniture

Now, more than ever before, is quality apparent in Peterson Equipment. Correct design and scientific construction mean long years of satisfactory service. We will gladly submit specifications and quotations without obligation on your part.



1205

A dual-purpose table serving both Physics and Chemistry instruction. Ample drawer and cupboard space. Two compartments in rear for tubing, etc.

Write for Complete Laboratory and Library Catalog No. 16-A

LEONARD PETERSON & Co., INC.

Manufacturers of Guaranteed Laboratory and Library Furniture
OFFICE AND FACTORY

1222-34 Fullerton Ave., Chicago, Ill.
New York Sales Office: Knickerbocker Building, 42nd and Broadway

Fort Massac Folding Chairs



with bentwood steel-braced construction. Lighter, stronger, more durable, and much more comfortable than any all-metal folding chair.

For auditoriums, classrooms, stage-use and wherever comfort, beauty, strength and longer services are required.

The Eton School Model

Built especially for the hard use given folding chairs in auditoriums. Deep, broad back-panels give full, comfortable support to the shoulders and back. Easily set up, quickly and quietly folded, either from front or rear as shown. Folds flat and compactly. 100 chairs will store in a space $11\frac{1}{2} \times 1\frac{1}{2} \times 3$ feet. Rear edge of seat is reinforced by a wood cross-member to prevent splitting.



Write for prices. Samples sent free for testing without obligation.

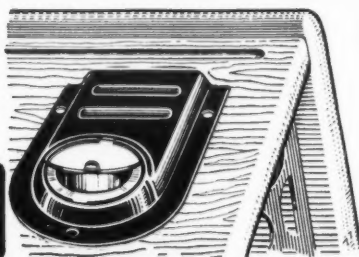
FORT MASSAC CHAIR CO.

Sales Dept. National City Bank Bldg.
CLEVELAND, OHIO

Factory: Fort Massac Park,
Metropolis, Illinois



U S INKWELL



Wins the approval of school authorities everywhere for a replacement well. It costs less. It "stays put" and cannot be damaged easily. It has no equal for durability. Ink spilling and "tinkering" is practically eliminated at desks fitted with U. S. Inkwells. Its dust-proof and air-tight construction also stops the trouble of ink drying. Teachers recommend it because of its noiseless operation.

Easy to Install

The ease with which U. S. Inkwells are installed in any type of school desk make them the outstanding favorite for replacement purposes. Anyone capable of handling a screw driver can put in U. S. Inkwells without trouble.

JOBBERS

Most school supply jobbers carry U. S. INKWELLS. Free sample of either Junior or Senior well sent free to school executives.

U. S. INKWELL CO.

AGENTS

Men or women to demonstrate U. S. Inkwells. Full or part time. Special commission proposition to teachers.

410 S. W. 9th St.
Des Moines, Iowa



- A. Flat Steel springs (resting on desk) force well into air tight contact with lid.
- B. Heavy Glass Inkwell — Easily cleaned — Round bottom — Pupil cannot set on desk.
- C. Heavy Black japanned Steel Frame.

Strongest

The lid slides shut—making well air tight. Three screws attach well to the desk. Raised penholders in the steel frame increase convenience and strength.

MANUAL TRAINING BENCH No. 280



A GLANCE AT THIS NEW PATTERN will show that the combination of various-size drawers and cupboard makes an unusually practical bench. Notice, especially, the small drawer which is intended to hold nails, screws, small tools, etc., which so easily become misplaced when kept with the larger tools. Being able to immediately lay hands on these small but necessary items, will be the means of saving a great deal of time, thereby promoting efficiency. Also, notice the large cupboard, which will hold such tools and materials which cannot be kept in the general or three private drawers. Bench is equipped with our Abernathy Rapid Acting Roller Nut Vise No. 70D on front, adjustable stop and dog.

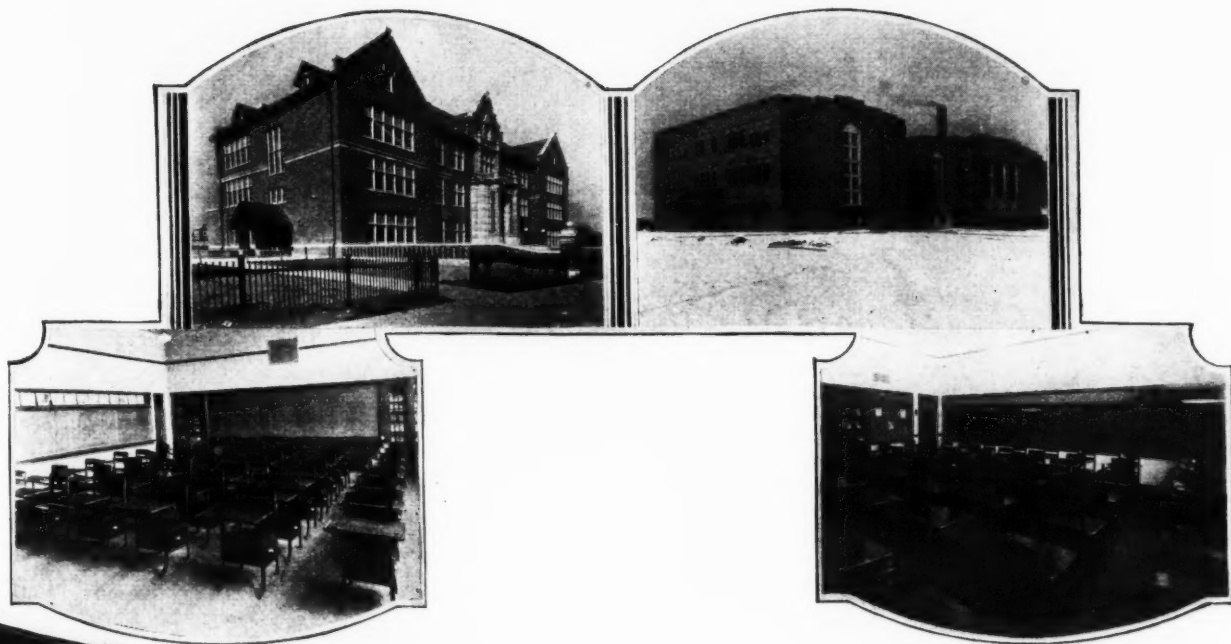
THE CHRISTIANSEN CO.

Manufacturer of this line since 1898

2814-2842 West 26th St.,

Chicago, Ill.

Acknowledgment



Up to August, 1931, more large orders for the regular type movable desk were placed for "Royals" than for any other one make.

Moreover, of the nine largest cities in the United States using regular movable desks, five purchased "Royals" this year—and "Royals" are not the lowest in price.



Royal

Movable Desks
Folding Chairs
Teachers Chairs
Sewing Room Chairs

Tablet Arm Chairs
Kindergarten Chairs
Typewriter Chairs
Steel Stools

New catalog now available

ROYAL METAL MANUFACTURING COMPANY, 1130 S. Michigan Blvd., Chicago, Ill.

Royal Distributors are Located in 38 States

— Metal Furniture Since '97 —

On Duty the ~~MURDA~~ Never Sleeps

It is on the job day and night, requiring no attention but a weekly winding. Classes are called and dismissed automatically with clocklike regularity and the school program is divided into exact periods, with fairness to all.



\$150 F.O.B. FACTORY
Install it yourself.
It requires no servicing.

The entire teaching force is free to concentrate on important duties and no one is called upon to watch the clock

All
Day
Long

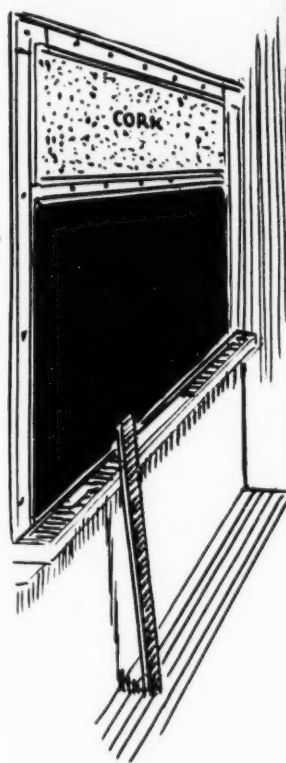
Every school, large and small, should have one.

Built upon an 80 beat Seth Thomas movement, the Murda Program Clock is a simple, dependable device which will operate automatically all the bells in the building on from one to four separate circuits, silencing them at night and on Saturday and Sunday. No expert servicing is ever required on its simple mechanism. Initial expense is low and cost of upkeep is negligible.

Write us for descriptive literature.

THE MURPHY-DAVIS SIGNAL COMPANY, INC.
418 Kansas Avenue, Topeka, Kansas.

8:14
8:24
8:48
8:52
9:32
9:36
10:16
10:20
11:00
11:04
11:48
Noon
12:52
12:56
1:36
1:40
2:20
2:24
3:04



No More Chalk Dust!

Save Health,
Chalk and
Cleaning Costs

FOR the children's sake...for your budget's sake...take

advantage of this simple, sanitary invention, a great step in schoolroom construction. Frees the air of chalk dust, keeps erasers clean. Now specified in leading schools and universities. Easily installed in old or new buildings.

For full information, write

DUDFIELD MANUFACTURING CO.
116 W. Kansas St., Liberty, Mo.

SANFORD'S Inks and Paste for Schools

The Name SANFORD'S has
Meant Fine Quality
for 72 Years

Careful buyers of school supplies find real economy in selecting Sanford's Inks and Pastes—a policy that has been safely followed by experienced buyers for nearly four generations.

SANFORD'S School Black Ink

An Example of Quality at Low Cost

For general school purposes, Sanford's School Black Ink is ideal. It is a fine quality black aniline ink that writes a deep black and dries black. Because it does not thicken in ink wells, it does not cause pens to clog and blot. Pupils are able to write freely and neatly.



SANFORD'S School Paste

White - - Clean - - Economical

For many years this white, clean paste has been the choice of supply buyers. It is easy to use, sticks readily and is put up especially for school use. It is an unusually fine quality paste sold at a price that makes it most economical to use. There are four sizes: No. 751, Quarts; No. 752, Pints; No. 755, Gallons. Also in half pints.

Write for our School Supply List

Sanford Manufacturing Co.

CHICAGO, ILL.

NEW YORK, N. Y.

SQUIRES INKWELLS

Squires No. 59
Boston Inkwell



We make the Boston Inkwell with three different styles of tops and three styles of glasses, all interchangeable. They fit a 1 3/8 inch hole.

Squires No. 12
Common Sense Inkwell



Our No. 12 or Common Sense Inkwell is made in three sizes, to fit holes 1 1/4", 1 3/4" or 1 7/8". Corks with Caps or Rubber Corks furnished as desired.

Squires No. 14
Self-Closing Inkwell



No. 14 Self-Closing Inkwell has a Hard Rubber Top and fits a 2-inch hole. It is the best inkwell on the market.

Squires No. 3 or
Chicago Inkwell



We furnish a one-lug or a three-lug glass for this inkwell which fits a 1 3/8 inch hole. Nickel Plated.

Write for Catalogue, Prices and Samples.

SQUIRES INKWELL COMPANY

Brady Bldg., Third Ave. and Ross St.,

Pittsburgh, Pa.



CLARIN CHAIRS are made of steel (excepting seat and rubber floor contacts) and will not mar the finest floor nor damage the most delicate floor covering.

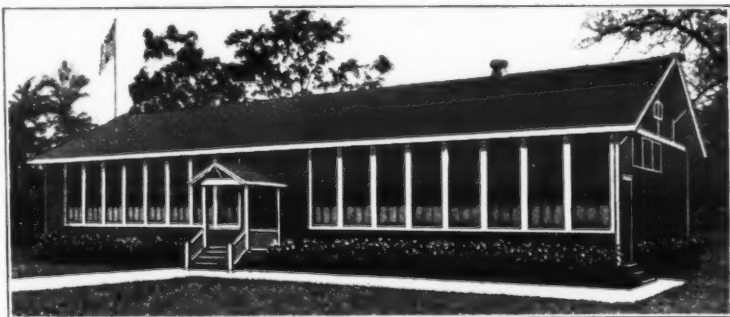
.....The..... IDEAL FOLDING CHAIR

is intended especially for
the discriminating buyer.



Let us send you a sample without obligation —
you will readily understand!

CLARIN MFG. CO., 4640 W. Harrison St., CHICAGO, ILL.



Solve Your Schoolhousing Problems With

HARRIS UNIT BUILT SCHOOLS

Low Priced—Quickly Erected

IF YOU are in urgent need of classroom space, let America's largest producers of sectional buildings come to the rescue with a Harris Patented Unit-Built Schoolhouse. Designed to accommodate from 40 to 400 pupils and embody every desirable feature of modern school requirements; correct light, perfect ventilation, sanitation and safe construction, yet they are low in cost.

Harris School Buildings, built with double roofing, double flooring with insulation between, and double wall insulation, are warm and cozy on winter's coldest days as well as cool and comfortable during summer's scorching heat; superior construction features you would hardly expect to find in such low priced buildings.

Ready For Quick Shipment

We can make immediate shipment on any size building. Simply wire, write or phone and tell us your needs and we will furnish complete plans, prices, and specifications at once.

Write For Our NEW PLAN BOOK

Write today! Ask for our 1931 Book of Schools with names, locations and illustrations of buildings recently completed. Explains many short cuts in the planning of your building with an assured saving in the completed cost.

Ideal Classrooms For Every Need

School Districts everywhere with limited building funds, find Harris Schools the safe, sure, economical answer to the problem of overcrowded classrooms. Harris schools are Guaranteed throughout.

HARRIS BROTHERS CO.

1349-1525 West 35th Street

NEW YORK

• CHICAGO •

DETROIT

The Last Word in **WASHABLE SHADES** *« « for Schools » »*

**Don't Delay
School Shade
Replacements**

Although the school term has begun do not put off making necessary school shade replacements. Worn, inefficient, unscientific shades contribute to eyestrain; deter educational progress.

School shade replacements can be made without interruption of class schedules. It is too important a matter to postpone. Write the Shade Service Bureau today and our nearest distributor will call on you immediately with a complete line of school shades that will meet every requirement and budget.

SWANTEX

*guaranteed
weatherproof
waterproof
soilproof
stainproof*

Here are just a few of the amazing features of SWANTEX. Smear grease on it; stamp on it; soil it in any way; a soap and water washing makes it like new again. Even inkspots are easily removed with soap and water.

Swantex is as durable as it is washable. It will not crack, pinhole or stretch. It is the finest washable shade yet it costs but a few cents more than ordinary shading.

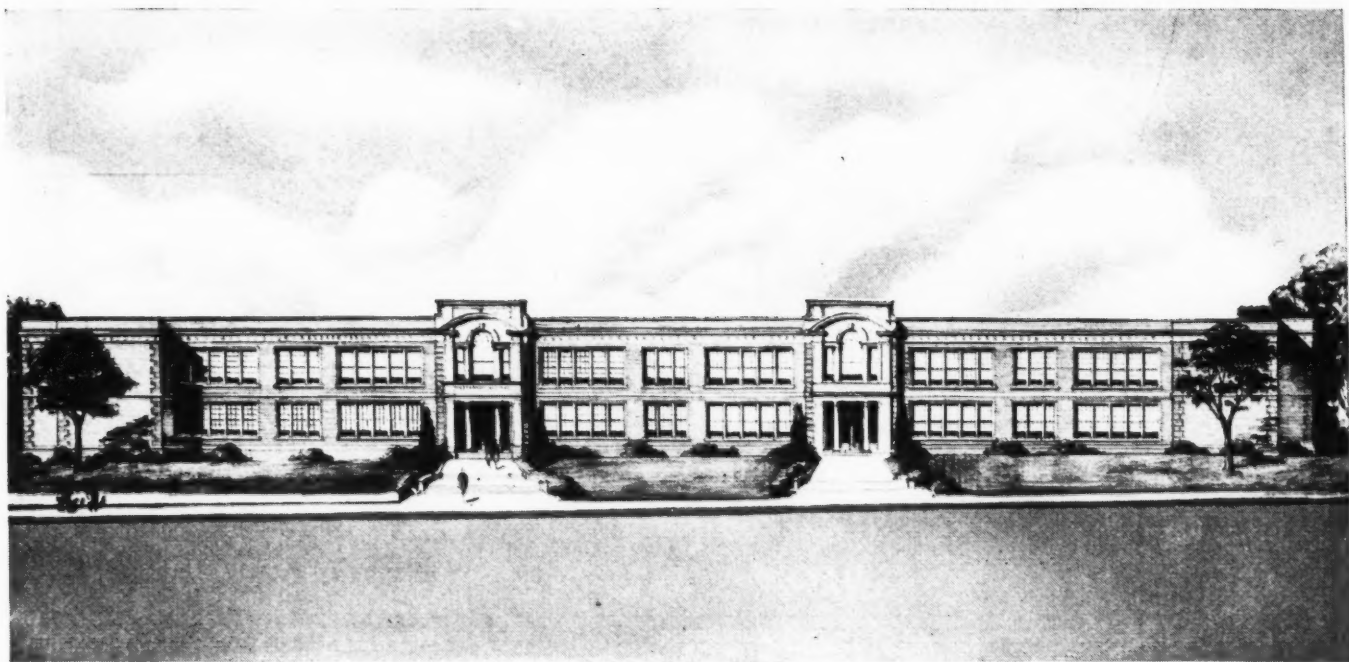
Swantex is only one of the many desirable shade cloths offered by the Shade Service Bureau. Before you buy any shades it will be to your advantage to see the complete Maxwell Shade Service line which includes the famous Lifetime canvas. Regardless of what your requirements may be the Maxwell Shade Service Bureau can fill them.

**Maxwell's Shade
Service Bureau**

3636 Iron Street

Chicago, Ill.

THIS NEW JERSEY HIGH SCHOOL RELIES ON A JENNINGS



Millburn High School, Millburn, N. J.; Guilbert & Betelle, architects, Newark, N. J.

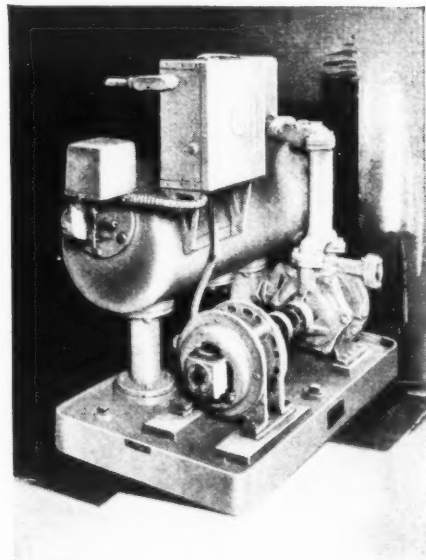
FOR flexible heating and close control of temperature under all weather conditions, the Millburn High School, in Millburn, N. J., relies on a motor-driven Jennings Return Line Vacuum Steam Heating Pump.

Automatic in operation, a Jennings Vacuum Heating Pump keeps the system always free of air and condensation. A full even flow of steam to every radiator is assured.

NASH ENGINEERING CO.

11 Wilson Road South Norwalk, Conn.

Jennings Pumps



Jennings Vacuum Heating Pumps are furnished in single and duplex types and capacities of 4 to 400 g.p.m. of water and 3 to 171 cu. ft. per min. of air. For serving up to 300,000 sq. ft. equivalent direct radiation.



VOL. 83
No. 3

SEPTEMBER,
1931

THE AMERICAN School Board Journal

A Periodical of School Administration

Eastern Office:
342 MADISON AVE.
NEW YORK, N. Y.

Published on the first day of the month by
THE BRUCE PUBLISHING COMPANY
524-544 No. Milwaukee Street, Milwaukee, Wis.

Western Office:
66 E. S. WATER ST.
CHICAGO, ILL.



Increased School Support

The word "retrenchment" has during the past year come into frequent use. It also has been heard in the field of school administration. The trend of the times has given an added emphasis to the word "economy." And when all is said and done, it remains that reasonable economy should be practiced at all times whether the times be good or bad.

To demonstrate that the school administrator is not so easily stampeded from what he believes must be done is illustrated in the recent departures along the lines of school support. Approximately one half of the states have enacted legislation to equalize the cost of education between district and district, thus bringing educational opportunity upon a higher level. The United States Office of Education says: "School finance held the attention of state legislators in 1929 and 1930 more than any other school problem. The principle that school facilities and school costs should be equalized as far as practicable throughout the state won legislative sanction in approximately one half of the states."

And what does all this mean? It means that the American people stand ready at all times to finance the cause of popular education generously and adequately. It means that millions of dollars have been added annually to the support of the schools.

These decisive strokes in school finance overshadow the incidental salary cuts noted here and there and the minor paring of school budgets. They express a confidence in the economic vitality of the country, emphasize the principle of equal educational opportunity, and recognize the value of training the youth for the duties of American citizenship.

The cause of popular education is in safe hands. The schools will go on with momentum, with enthusiasm, with efficiency.

THE EDITOR.

TABLE OF CONTENTS

Cartoon: Wealth's Splendid Opportunity.....	33
<i>Harold Heaton</i>	
The School Board's Work Appreciated.....	34
<i>Don R. Leech</i>	
School Administration's Needs.....	34
<i>J. M. Robb</i>	
Administrative Practices Followed in the Organization of Elementary Schools.....	35
<i>Henry J. Otto</i>	
Bringing the University and Public Schools Together.....	37
<i>Thomas R. Cole</i>	
A Playground That Achieves Maximum Use.....	38
The High-School Principal and Public Relations.....	39
<i>Herbert R. Dieterich</i>	
A Study in Pupil Costs of Buildings.....	40
<i>Jesse J. Pugh</i>	
Suggestion and Its Relationship to Supervision.....	41
<i>Edwin J. Brown</i>	
Shall the Supervising Principal Act as the Chief Executive of Small Towns?.....	42
The Payment of Tuition in the Public Schools.....	43
<i>Crawford Greene</i>	
Los Angeles School Janitors Win Silver Cups.....	46
<i>Valerie Watrous</i>	
Minneapolis Graduates Janitors.....	46
The Practicability of State Insurance Funds.....	48
<i>Walter F. Beyer</i>	
Getting Full Value in School Business Management.....	49
<i>G. E. Van Dyke</i>	
The Clutch of Circumstance.....	51
<i>Lynn E. Castle</i>	
John Deere Junior High School, Moline, Illinois.....	53
<i>Lewis A. Mahoney</i>	
Deland Grade School, Daytona Beach, Florida.....	56
Mural Paintings in Schoolhouses.....	57
<i>Charles G. Loring</i>	
Check List of Steps Used in Scheduling a Modern High School.....	61
<i>C. W. Ricksecker</i>	
School Interest Rates Rise.....	64
<i>Harold F. Clark</i>	
Planning the Teacher's Work on the Unit Basis.....	74
<i>Gale Smith</i>	
School Costs and the Teacher Load.....	111
EDITORIALS:	
School Administration and the Business Depression.....	62
Using the Public Schools for Propaganda Purposes.....	62
The Schoolmaster and Freedom of Speech.....	62
School Bonds Versus Pay-as-You-Go Plan.....	62
Premature Information on School-Site Selection.....	63
Exactng Certified Checks with School Bids.....	63
Washington Correspondence.....	66
<i>A. C. Monahan</i>	
Chicago Correspondence.....	70
New Rules and Regulations.....	73
Personal News of School Officials.....	76
School-Building News.....	78
School Finance and Taxation.....	80
Rules Governing School Custodians.....	87
Book News and Reviews.....	88
Public-School Reserve Funds.....	95
School Law.....	98
Teachers' Salaries.....	108
Teachers and Administration.....	114
New Publications.....	122
School-Board News.....	126
Buyers' News.....	136
After the Meeting.....	138

Copyright, 1931, by the Bruce Publishing Company. All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second Class Mail Matter in the Post Office at Milwaukee under Act of Congress of March 3, 1879.

Subscriptions—In the United States and possessions, \$3.00 per year. In Canada, \$3.50. In foreign countries, \$4.00. Single copies, not more than three months old, 35 cents; more than three months old, 50 cents. Sample copies, 35 cents.

Discontinuance—Notice of discontinuance of subscriptions must reach the Publication Office in Milwaukee, at least fifteen days before date of expiration. Notices of changes of address should invariably include the old as well as the new address. Complaints of nonreceipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the *Education Index*. Member, Audit Bureau of Circulation and Associated Business Papers.

"STANDARD"

ELECTRIC TIME - AUTOMATIC PROGRAM



TELEPHONE SYSTEM



**ONE
GUARANTEE
COVERS
ALL**

FIRE ALARM EQUIPMENT



LABORATORY VOLTAGE DISTRIBUTION PANELS



The advantage of one guarantee covering all important school electric equipment cannot be overestimated.

It saves duplication of effort—simplifies installation—reduces service and maintenance expense—insures satisfactory coordination of all equipment—and last but not least important, gives school officials an assurance and feeling of security which a miscellaneous collection of equipment never can give.

"Standard" manufactures and furnishes every essential low tension equipment for the modern school. Equipment which has been carefully developed and thoroughly perfected from the experience of nearly half a century.

The "Standard" One Guarantee Covers All—with free maintenance for one year.

Have "Standard" equipment installed in your buildings and gain the many advantages of the

"Standard" — One Guarantee Covers All

THE STANDARD ELECTRIC TIME COMPANY

Springfield, Mass.

Atlanta, William-Oliver Bldg.
Baltimore, Baltimore Trust Bldg.
Birmingham, 2920-7th Ave. So.
Boston, 10 High Street

Buffalo, 220 Delaware Ave.
Chicago, Monadnock Bldg.
Cleveland, Union Trust Bldg.
Columbus, 83 South High Street
Dallas, Mercantile Bldg.

Denver, 562 Pennsylvania St.
Detroit, Donovan Bldg.
Kansas City, Mo., Mutual Bldg.
Minneapolis, McKnight Bldg.
New York City, 50 Church Street

Philadelphia, 1612 Market Street
Pittsburgh, Bessemer Bldg.
Scranton, 148 Adams Ave.
Tampa, 5505 Central Ave.

Los Angeles, 124 West 4th Street
Portland, 65-1st Street

The Standard Electric Time Co. of California
Berkeley, 950 Parker Street

The Standard Electric Time Company of Can., Ltd.
Montreal, P. Q., Can., 726 St. Felix Street
Toronto, 57 Bloor St., West

Seattle, 1714-1st Ave. So.
Spokane, 110 S. Cedar Street

"STANDARD MAKES EVERY MINUTE COUNT"

THE AMERICAN School Board Journal

Volume 83, No. 3

SEPTEMBER, 1931

Subscription, \$3.00 the Year



WEALTH'S SPLENDID OPPORTUNITY

The School Board's Work Appreciated

Don R. Leech, Superintendent of Schools, Albion, Nebraska

A board of education is in a difficult position. Members are elected to their positions seldom, if ever, by unanimous vote. It seems ever to be the prerogative of the minority to assert its rights, especially to criticize the work of the majority.

The modern board of education is a natural product of evolution of our democracy. Seventy-five years ago there was no such organization as we now know it. The position of superintendent of schools was not yet established except in name, and no definite principles had been developed for the guidance of boards in the successful execution of their duties. In fact, it has only been within recent years that there is any unanimity of opinion as to what constitutes the duties of the board of education.

The first general principle that has been established is that the board of education is a legislative body. This means that the general policy and ideals of the school are determined by this body. The second general principle is that the board of education shall have the general supervision of the schools. The successful execution of the duties involved in these two principles has necessarily developed a third principle or practice: This is the responsibility of the board of education to select a chief executive, technically known as the superintendent of schools. Much of the success of the whole school program is involved in the relationship between the board of education and its chief executive.

Extremes in Relationship

The ideal relationship has not been the usual one in the past, and it is far from universal even today. In some schools the entire running of the school is placed in the hands of the superintendent. He makes the laws and executes them; he employs and discharges teachers and employees without let or hindrance; he buys with only meager restrictions; he decides on educational policies and executes them. This limits the activity of the board of education largely to that of signing contracts and paying bills. This idea of the relationship between superintendent and board is not in harmony with sound principles of representative democracy and clashes with the consensus of opinion of leading school administrators and school boards of today. To work effectively, boards of education cannot meet their responsibilities to the people by shifting them on to the chief school executive. This is one extreme.

The other extreme is found in an entirely different situation. Here the board of education continues to put into practice the long-abandoned idea that it is in duty bound by a mandate from the people to *run* the schools. To such a board of education, running the schools

means selecting the teachers; buying the textbooks; instructing the janitor how to sweep the floors; advising the primary teacher how to teach reading; and showing the athletic director how to coach football. This is the other extreme.

The true ideal lies somewhere between.

The Board's True Duty

Upon the modern board of education has been placed the responsibility in general of seeing that the children of the community receive the best education that the community can provide. It is true this responsibility cannot be delegated, yet much professional help and advice is highly desirable from the chief executive.

Boards of education should study carefully the demands on the school budget, and then take the necessary steps to raise the money to meet the budget. The responsibility of the members does not end with merely raising the funds, but the board must see to it in a general supervisory way that the money raised is spent in harmony with the budget.

Another duty rests upon the members of the board of education: This duty is one of keeping so well informed on school conditions, plans, and policies as to be ever ready to give an intelligent answer to questions raised by taxpayers and patrons of the schools. This information should extend not only to the general policy of the schools, but to present practice.

More and more we are coming to realize that our schools are an instrument for adjusting our social system to new needs and complex conditions. Their importance cannot be overemphasized.

Information Due the Public

The only safe course for a board of education to pursue is one of strict attention to the business of caring for the schools on a high plane, being careful to present to the patrons of the school an explanation of its official acts. The board of education that functions best is the one that has the largest possible number of groups represented in its membership. The position requires the best efforts of intelligent, broad-minded individuals of wide experience — of men of affairs. School-board members must necessarily give much time and effort to the needs of the school community.

They say that outside of popular fiction there are not many men who are ready to sacrifice friendship and fortune in the service of the state and community. Such men are needed on every school board. Many such men there are. All honor to such unselfish board members. To them should be given much credit for the splendid organization that now exists in the public-school system of our country.

sional services in the educational field, but it also means that he is permitted to control all of the business activities to the same extent that the general manager of any commercial operation must be intrusted with plenary powers.

If the superintendent is in any way unfitted for the proper exercise of such powers, the board that he serves has labeled its own business judgment very undesirably. Any expedient to correct errors in judgment of this nature, such as the bringing in of some new found friend, by some forceful board member, to tell the superintendent how to run his job, is putting the cart before the horse, with the inevitable result.

The principle involved in this discussion, is that of establishing proper channels of authority, and then utilizing these channels to their full possibilities, in the same way that any modern power plant serves its community.

No school organization can be any more than the expression of the aspirations and hopes of the community that taxes itself to maintain the schools. And no community can be any more than a reflection of the spirit of its school organization.

The test of the proper application of this principle comes when building-construction and equipment problems are to be solved. If the superintendent does not know the distinction between so-called school architectural organizations (who function upon the foundry-pattern system, with mass production of specifications, with highly specialized salesmen as the biggest force in such organizations) and *real school architects*, the board that has employed him, has again labeled its business judgment undesirably.

The modern school superintendent, who is as much of a business executive as he is an educator, knows that every engineering operation, architectural or otherwise, is an attempt to produce the same harmony in materials, that the symphony orchestra seeks to evolve in music.

He recognizes the necessity for a grand chorus effort from the greatest number of highly trained performers that can be assembled, under the direction of one who really directs, instead of misguidedly seeking the solo parts.

Such a modern superintendent is very wary of the claims of any architectural organization that sets up that it has all of the necessary engineering talent within itself, because he recognizes that any one-man orchestra is likely to be all bass drum, with just enough tinkle to soften somewhat the insistent beat of *me — me — me*.

The same line of reasoning applies to some of the large city school architectural and engineering staffs, whose practice today is in such a rut of routine, from the crystallized standards of yesterday that dynamite is about the only hope to lift the entrenched performers high enough to recognize the progress of their neighbors.

The modern school superintendent recognizes the manufacturer whose hope of profit forces him to design his equipment to practically apply the experiences of yesterday, to the service of tomorrow, as the dynamite that he can profitably use to lift overdepartmentized effort out of the ruts of routine. He recognizes the necessity for this operation, whether it must be performed upon the staffs within the school-administration organization, or upon those splendid private architectural organizations who need the service in order to keep them near the head of the procession of progress, where they ought to be.

While the school superintendent is the servant of the board that employs him, those boards that have progressed likewise in their business policies, recognize the vital importance to limit their effort to determining policies. They display sound modern business judgment when they give their servant full authority to decide upon details, after the important decisions upon policies have been made.

(Concluded on Page 116)

School Administration's Needs

J. M. Robb, Peoria, Ill.

The greatest need in the field of school administration of today is the trained technical adviser. The standards of yesterday may hamper the practice of today unless the administrator can distinguish between the present and past needs, and bring the experiences of yesterday to the service of tomorrow.

In the selection of technical advisers, however, sane common business sense must be applied. There is a swarm of so-called school specialists, who operate similar to the engineer who suffered a nervous breakdown from driving his car. This man's collapse was brought about by

his losing his chance to cross too many busy intersections, because of excessive calculation of his chances to cross.

The only insurance against the malpractice of so-called technical advisers, is the business judgment of the superintendent of schools. The board of education that has succeeded in the choice of a wise superintendent, has made a beginning at the proper solution of all of its problems, when it clothes this valuable servant with sufficient authority to enable him to function so as to realize the possibilities of his office. This not only means the more strictly profes-

Administrative Practices Followed in the Organization of Elementary Schools

Prof. Henry J. Otto, Evanston, Illinois

During the spring of 1929 the writer undertook an extensive investigation¹ to ascertain the general administrative practices which are followed in the organization of elementary schools in cities ranging in population from 2,500 to 25,000.² Superintendents of schools from 395 cities in 31 states coöperated in the study by describing on prepared forms the administrative procedures which are used in the elementary schools of the district in which they have charge.³

A study of the current procedures followed in the organization of elementary schools shows many dissimilarities. The various ways of doing things, as revealed by the check lists, are found in operation in different percentages of the school systems studied. Instead of citing the percentage of districts which follow each of the practices, the writer selected those administrative procedures which were found in at least half or approximately half of the school districts. An elementary-school unit, embodying the practices selected in this manner, is defined for convenience of this discussion as the typical organization for elementary education in cities ranging in population between 2,500 and 25,000.

The reader will recognize, however, that there may be no district among those surveyed in which the unit for elementary education embodies all of these procedures. Because of the larger number of returns from the smaller of the cities chosen for investigation, the description will be somewhat more characteristic of practices found in the smaller cities of the group. One must bear in mind also that neither were all phases of elementary-school organization included in the present study, nor were those which were included investigated in detail. To have prepared a check list which would reveal in detail all the administrative devices followed in the different school systems was not feasible. Hence, the study was confined to the prevailing practices concerning what appeared to be the most significant aspects of elementary-school organization.

The Typical Elementary-School Unit

The typical organization for elementary education in cities of the size investigated consists of the kindergarten and grades one to six, inclusive. The elementary-school population of the district contains approximately 924 children, exclusive of kindergarten pupils. The school system employs 27 elementary-school teachers, each of whom has charge of a class of 35 pupils. The elementary grades are housed in three or four buildings devoted exclusively to the education of elementary-school pupils. Both gymnasium and auditorium facilities are available in one or more of these buildings. Neither of these facilities, however, is used regularly by grade-school pupils.

Kindergarten training is provided for all the eligible pupils of the district. Children are admitted to the kindergarten at a minimum age of 4½ years and are retained in the kindergarten one school year. The basis for admission to the kindergarten is chronological age. The median age of admission to the first grade is 5.67 years. The basis for admission to the first grade is chronological age.

In this typical elementary school the children of each grade are divided into two groups. The pupils in each of these groups are further organized into classes of convenient size. The measures which are applied in classifying the pupils for instructional purposes differ so much for the various school systems that no one practice can be designated the prevailing one. Twenty different arrangements were reported. From the large number of plans which were reported, the teacher's marks and the teacher's estimate of intelligence appear to be the criteria most frequently used for classifying the pupils of any grade. The pupils in each classroom are divided into two groups for instructional purposes. A variety of methods is used to section the pupils within classrooms. Ninety different plans were reported. The teacher's estimate of pupil industry and initiative, although reported for less than one half of the systems, is used most commonly in sectioning classes.

The curriculum in the elementary school is guided by course of study prepared under the auspices of the state department of education. Arithmetic, English, geography, history, spelling, and reading are usually considered academic subjects. Art, music, and physical education are commonly classed as special subjects. The responsibility for adapting the course of study to the varying needs and capacities of pupils is left to the teachers. Enrichment for the bright pupils or modification of the curriculum content for the duller children is not definitely planned for the school system. Each teacher, however, is permitted to vary the time allotted to the various subjects, in accordance with the needs of the pupils assigned to her. Instructional assistance for pupils, other than that given as a regular part of the class procedure, must be provided before or after the usual school day. Pupils who do not come voluntarily to receive additional help from the teacher are chosen by the teacher on the basis of the teacher's marks and the teacher's estimate of pupil initiative and industry.

The program for instruction is arranged in such a way that each teacher is given full charge, or almost full charge, of all the teaching in a particular grade or class. When the classroom teacher is not given complete responsibility for all instructional activities, music and art are taught by special teachers or supervisors. The preparation and the planning of the daily classroom program of teachers are done coöperatively by two or more staff members. The classroom teacher participates in this task as one of the coöperating members.

In this typical elementary school, pupils are promoted annually. Endeavors to aid in the adjustment of certain pupils to be organized practices of the school are suggested by the fact that capable pupils are allowed to skip one or more grades, slower pupils are asked to repeat grades, while still others are promoted on trial to a higher grade. There is no one particular plan for the selection of pupils for promotion which may be said to be characteristic of the school systems investigated. A total of 122 different promotion schemes were reported. Various staff members participate in designating the pupils to be promoted. Coöperation in this regard is found most frequently between the classroom teacher and the building principal. The measures which are used in selecting pupils, likewise, differ so much for the various districts that no one practice may be specified as typical. However, a combination of two or more criteria is preferred by a majority of the systems. The teacher's marks and the teacher's estimate of

initiative and industry are the measures most frequently reported.

On the surface it might appear that an elementary school organized along the lines indicated in the above description would be a rather formalized institution. The administrative practices which have been portrayed are applied in all six grades. The organization, as such, appears to be rigid in its operation. Children are admitted on an age basis, classified on the basis of teacher ratings, and reclassified or promoted once a year. Administrative provisions for adapting the organization to the varying needs and capacities of pupils are conspicuously lacking. The course of study is uniform for all pupils, except for the modifications made by individual teachers, and according to their own judgment.

To evaluate or to rate the procedures followed in this typical school would be a difficult task. One is confronted with the discrepancies which exist between the descriptions of an organization as it may appear on paper and the actual functioning of that organization in a local situation. One must remember also that all phases of the organization were not included in the investigation, nor were those chosen treated in great detail. No doubt there are many interrelated factors which condition the desirability and the effectiveness of specific administrative procedures. To judge or to weigh practices in isolation from the personnel, the school plant, and the whole local environment may be misleading. Also, it is likely that very few school systems confine their administrative practices to those described for the typical situation. Although the typical school has been described in terms of the devices found in operation in approximately 50 per cent of the systems studied, many of the districts follow one or more of the other procedures reported. Throughout all aspects of the study wide variations in practice were found in the different systems. Let us then turn to a consideration of these variations from the practices most commonly found and to the implications and problems which are suggested.

Six-Year and Eight-Year Schools

In the 31 states included in the present study the elementary schools in cities with a population between 2,500 and 25,000 may be clearly differentiated into two general types; namely, six-year and eight-year schools. Only 4 per cent of the school districts from which returns were received operate elementary-school units other than these two types. More than half (54 per cent) of the systems represented maintain an elementary school which embodies only the first six grades. The latter plan of organization is found somewhat more frequently in the larger of the communities surveyed.

One does not know the rate at which the traditional eight-year elementary school is being replaced by the newer form of organization which confines the rudiments of elementary education to the first six grades. In 1925, the Commission on Length of Elementary Education which studied school systems in communities of varying size, found the eight-year elementary school the most common type.⁴ In 1926, 72 per cent of the cities over 100,000 in population and 61 per cent of those with a population between 30,000 and 100,000 had established junior high schools.⁵ The size of community seems to have

¹During the progress of the study many helpful suggestions were given by Dr. Fred Engelhardt, College of Education, University of Minnesota.

²Henry J. Otto, *Current Practices in the Organization of Elementary Schools*, to be published by Public School Publishing Co., Bloomington, Ill.

³The following states are not included in the study: Alabama, Arkansas, Florida, Delaware, Georgia, Kentucky, Louisiana, Mississippi, Maryland, North Carolina, South Carolina, Tennessee, Texas, Virginia, West Virginia, Oklahoma, and New Mexico.

⁴C. H. Judd (Chairman), *Report of the Commission on Length of Elementary Education*, Supplementary Educational Monographs, No. 34, University of Chicago, 1927, p. 1.

⁵*Articulation of the Units of American Education*, Seventh Yearbook, Department of Superintendence, 1929, p. 211.

been an important factor in junior-high-school reorganization. Yet, in cities ranging in population from 2,500 to 25,000 the transition to the six-year unit has progressed sufficiently so that at present only 42 per cent of the systems studied adhere to the older eight-year plan.

One might anticipate that a reorganization which would incorporate grades seven and eight as a part of the period of secondary education would also result in material modifications in the administrative practices followed in the resulting six-year elementary school. A comparison of the administrative practices followed in the two types of school organization reveals only minor and rather insignificant differences. Kindergartens are found more commonly in the districts which operate six-year elementary schools. This difference, however, may be characteristic of practices in the larger communities rather than a particular attribute of the six-year schools. Gymnasiums are used more regularly for all grades in the six-year schools. Since both six-year and eight-year units are usually housed in buildings devoted entirely to the elementary grades, it is likely that in eight-year schools an extended program in grades seven and eight may prevent the lower grades from using the gymnasium. Teaching on the departmental plan is practiced in a larger proportion of the eight-year schools (84 per cent) than in the six-year units (37 per cent). This difference, however, is due to the prevalence of this practice in grades seven and eight. If the comparison is made between the six-year schools and grades one to six, inclusive, of the eight-year schools, the difference in the proportion of schools using a plan of departmental teaching disappears.

Apparently the type of reorganization involved in the establishment of six-year elementary schools has not effected material changes in the administrative practices followed in the first six grades. That is, taking the upper grades of the elementary school and incorporating them in a new administrative unit has not been accompanied by changes in the organization of grades one through six. There are, of course, also those who believe that in many instances junior high schools merely represent traditional practices in an administrative unit with a new title.⁶

It may be that when school executives contemplate changes in the organization of certain grades, little thought is given to the possibility of similar changes in other grades or the extent to which modification at one point in the school system paves the way for administrative changes in other parts of the system. That is, change is contemplated with reference to specific situations, or grades.

Influence of School Plant

The data from the school system surveyed show that some districts house all elementary-school pupils in large buildings, that is, buildings having twenty or more classrooms. Other cities with similar elementary-school enrollments are housing their pupils in a large number of small buildings (one to three or four rooms) scattered throughout the district. Still other systems have one or more large buildings and several small buildings. In many instances pupils from all six or all eight grades may be found in each of the smaller structures. Doubtless the practices relating to the classification of children and the distribution of teaching duties differ materially under such varying circumstances. In fact, every administrative procedure may be influenced by the number of buildings, the size of buildings, and the location of buildings within the district and with reference to each other.

The educational offering as well as the administrative practices may also be influenced by

the plant facilities found in each of the buildings. Domestic science and manual arts may be offered to pupils enrolled in buildings which have the necessary specialized facilities, whereas such subjects may not be available for pupils in the same district who are attending distant buildings not designed or equipped for the special activities. Many of the superintendents who reported the use of gymnasiums and auditoriums indicated that these special facilities existed only in some of the elementary-school buildings of the district. Hence pupil activities, teacher responsibilities, and the entire administrative and supervisory plan may depend in part upon the physical plant. Inadequate plant facilities may be partially responsible for the fact that kindergartens are less commonly found in the smaller cities or in the smaller buildings of larger cities.

The Classification and Promotion of Children

In none of the aspects of elementary-school organization included in the study do school systems exhibit such numerous variations as in the practices relating to the classification and promotion of pupils. One must recognize, of course, that the way children are classified in local school systems may be determined largely by plant facilities, tradition, and other factors contingent upon local community attitudes. However, it seems quite apparent that there is little agreement among school systems as to the plans to be followed in classifying and promoting pupils.

Does this diversity of practice suggest equally great variations among school systems regarding the philosophies underlying the policies followed in classifying and promoting pupils? One might suspect that the wide differences suggest that those in the field are struggling with the problem of finding adequate and desirable criteria to apply. This, however, does not appear to be the case. Only a very small number of superintendents (when asked specifically) indicated that classification or promotion practices were regarded as experimental in character. The question might be raised as to how children should be classified to insure maximum efficiency in teaching and learning. At Winnetka, Illinois, pupils are assigned to rooms on the basis of age and social maturity.⁷ In Detroit, Michigan, the children of each age or grade group are divided into X, Y, and Z sections, largely on the basis of mental age.⁸ More recently Detroit has also adopted a plan of vertical grouping. Under this plan grades are combined into ability groups, rather than ability groups into grades. Instead of having groups of identical grade classification but of differing intelligence classifications housed in the same classroom under a particular teacher, groups from contiguous grades but of the same intelligence classification are housed together under one teacher.⁹

Collings, in a rural school, divided pupils ranging in age from 6 to 14 years into three groups.¹⁰ Such experimental evidence as has been gathered suggests that the innovations in practice are producing results about the same, or in some instances somewhat superior to those which are forthcoming under the traditional plans. It is recognized, of course, that many of the outcomes of the educative process have not been carefully measured.

The large number of different plans, or combinations of measures, which are applied in the selection of pupils for promotion indicates marked differences in the promotional policies of school systems. The reality of the differences

in the promotional practices of different school systems was amply demonstrated by the Commission on Length of Elementary Education through statistics of enrollments and the percentage of pupils repeating grades in the school systems of various states.¹¹ One may well raise the question as to what ought to be the policy with reference to pupil progress. What are the factors which condition student progress in the different school systems? What criteria ought to be applied in determining promotion or nonpromotion? If pupil progress is to be continuous, what might be the effect on the present concept of school grades? Just how significant is grade placement? Van Wagenen has shown that pupils in upper grades do a better quality of work as measured by standard tests than do pupils of the same mental age but placed two grades lower.¹² If grade placement is significant, then certainly promotional practices need critical evaluation.

Special Classes

The problem of the education of atypical children can be pictured more vividly as one views the provisions made in local public schools for these pupils. Only 38 per cent of the school systems surveyed had established any kind of special class for atypical pupils. Special classes for subnormals are found in 23 per cent of the districts. Ungraded rooms are operated in 15 per cent of the systems studied. No other type of special class is found in more than 3 per cent of the districts.

Data are not at hand to show the relative proportion of children in need of specialized education who are actually provided for in districts which do and in districts which do not maintain the various types of special classes. It may be that in districts which do not maintain special classes a larger proportion of the extreme deviates are sent to state or private institutions. However, there will be those who are not institutional cases and yet cannot profit a great deal from the usual classroom procedures. If special class education is desirable, how may it be provided in these smaller communities? Doubtless there is much to be desired, with reference to special classes, even in the districts which have one or more types of special classes to say nothing of the systems in which these classes are not maintained. Hilleboe found that the average of the eighteen school systems visited by him was caring for only 44.2 per cent of its atypical children.¹³ The same author reports that in New York an estimate based on the assumption that 2 per cent of all children of school age are special class pupils (mental defectives) shows that there are 526 pupils per special class teacher in cities of the first class and 4,685 pupils per teacher in the villages.¹⁴ Just what administrative provisions can be made to cope in an economical manner with the problem which is suggested by these facts is difficult to predict.

No doubt in the smaller of the districts studied the number of children of school age is a factor in causing the lack of a clear-cut distinction as to the type of pupils assigned to subnormal and ungraded classes. One may question the desirability of segregating into the same special class subnormal as well as normal but retarded or over-age pupils. It might be well to ascertain more carefully than has been done in the past the relative values accruing from the practices associated with the various kinds of special classes before radical measures are taken to establish them widely.

¹¹C. H. Judd (Chairman), *Report of the Commission on Length of Elementary Education*, Supplementary Educational Monographs, No. 34, University of Chicago, 1927.

¹²M. J. Van Wagenen, *Comparative Pupil Achievement in Rural, Town and City Schools*, University of Minnesota Press, 1929, p. 75.

¹³G. L. Hilleboe, *Finding and Teaching Atypical Children*, Teachers College, Columbia University, Contributions to Education, No. 423, p. 35.

¹⁴G. L. Hilleboe, *op. cit.*, p. 35.

A second paper by Dr. Otto will discuss "Trends and Problems in Elementary-School Organization."—Editor.

⁶L. C. Ward, "Junior High School Abandoned at Ford Wayne, Indiana," *Elementary School Journal*, 22: 647-649, May, 1922.

⁷C. W. Washburne, Mabel Vogel, and W. S. Gray, *The Winnetka Public Schools*, Public School Publishing Co., 1926, p. 20.

⁸*Adapting the Schools to Individual Differences*, Twenty-fourth Yearbook of the National Society for the Study of Education, Part II, 1925, p. 45.

⁹W. Vreeland, "Detroit's Experiment on Individualization," *School and Society*, 32: 398-402, Sept. 20, 1930.

¹⁰Ellsworth Collings, *An Experiment with a Project Curriculum*, The Macmillan Company, 1929, p. 49.

Bringing the University and Public Schools Together

Thomas R. Cole, Professor of Education, University of Washington; Formerly Superintendent of Seattle Schools

President M. Lyle Spencer, Dean Uhl of the School of Education, and other administrative agencies of the University of Washington, have been desirous for some time of securing first-hand information from the principals and superintendents of the State of Washington as to how the university could function more effectively in meeting the problems that are confronting the public schools. Too much time has been given by universities in perfunctory inspection with little or no assistance in return of a practical nature.

This condition led to a conference between President Spencer, Dean Uhl, and myself, which resulted in my accepting a position in the School of Education whereby I could give approximately one half of my time to graduate-seminar teaching and one half to school visitation. The seminar classes that I offered the past year are:

Fall: The Organization of Supervision and Administration.

Winter: The Organization of Supervision and Administration. Business Administration.

Spring: The Organization of Supervision and Administration.

The enrollment in these classes include teachers, principals, and graduate students from Seattle and towns near by.

The visitation work has as its objectives:

A. The study of administration and supervision in the schools of various sizes in the state. This information is to be used in the training of teachers, principals, and superintendents.

B. The study of teacher problems, especially beginning teachers. Teacher-training courses at the university to be adjusted accordingly.

C. Pupil Personnel. No special effort is being made to induce pupils to attend the University of Washington but, rather, to encourage them to select the schools which would offer the courses best fitted to their needs.

During the year just closed, I have visited sixty schools. The expense, which was nominal, has been borne by the university. The reception given me by teachers, principals, and superintendents, coupled with the invitation to revisit the schools, have clearly demonstrated the possibilities of the work that the university has inaugurated.

A Typical Report

After visiting a school, it has been my policy to make a brief report of the findings for reference purposes. I am quoting one of these reports just as given to the stenographer after my return from the visit. It will help to explain more definitely the nature of the work that is being done.

"Visited _____ school during _____, 1931. Pupil safety patrols in charge of traffic during the noon period. School grounds only fairly well kept. The playground at present is in front of the school, where it adds to the confusion and prohibits the entrance to the building being made an attractive civic asset. There is ample space in the rear of the building for the playground and play apparatus. The high-school building, with a small addition to one side for manual training, houses both the elementary school and the high school.

"The superintendent's office is on the main floor; the principal's office was merely a table in the library room on the second floor, with no other facilities for administrative work. He informed me that he kept some of his office equipment in his classroom. It was evident that an effective administration is somewhat dissipated by such an arrangement. The library room mentioned above is too small for library purposes and the books would be used much more extensively if they were transferred to the study hall

where there is ample space for them. Such an arrangement would also save two teaching periods daily, as separate teachers are now assigned to library and study hall.

"High school consists of 260 pupils, 100 of whom come by bus from outlying districts. The tuition for these pupils is obtained from the nonhigh-school-district fund. The school day is from 8:30 to 12:00 and 1:00 to 3:20, with five 70-minute periods. Eleven teachers, some of whom teach four periods with study hall or library assignments. The principal teaches three classes which leaves him too little time for supervision and administration. There was little or no evidence of personnel work being done. Daily program could be improved, which would eliminate one teacher, particularly so if the library books were transferred to the study hall. Such an arrangement is quite necessary to save a reduction in the teacher salary schedule.

Finances Too Generalized

"The finances are somewhat generalized and there is an evident need of more detailed accounting. The principal had little or no information concerning the per-capita cost. Assessed valuation is \$1,800,000, 20-mill levy, part of which is to be used to pay off bonded indebtedness which amounts to \$6,000.

"I was pleased with the principal's attitude. He was open-minded and anxious to receive suggestions. He called one or two of his teachers in to interview me concerning supervised study; and he asked for information relative to university entrance requirements. Both the superintendent and principal were well pleased, on the whole, with the teachers they have secured from the university. They called attention to the need of warning new teachers about their proper relations with pupils.

"The class in manual training interested me in that it was composed of both boys and girls. The application of the pupils was exceedingly good. The instructor said that the girls showed greater initiative than the boys and were designing small pieces of furniture which were being decorated very attractively.

"The elementary school consists of 500 pupils, 16 teachers. The principal, teaching part time (too much for proper supervision), was a very forceful and attractive woman, keenly interested in her problems. I saw some excellent, progressive types of teaching being done in the two upper grades. All of the elementary-school rooms were attractive, with an abundance of flowers, and the pupils were interested and happy."

Problems to be Solved

I wish to discuss briefly three of the problems that have been called to my attention during the school visitations:

A. *Administration.* The superintendents and principals are open-minded and eager to receive suggestions which will enable them to add to the efficiency of their schools. They want *practical help* which will assist them in solving special problems that are now confronting them. They appreciate, therefore, a visit from the state inspectors and persons directly connected with school-administration work.

One of the difficulties confronting the administrator today is that of finance. In some places the schools have been forced to reduce teacher salaries or increase the teacher loads. A better arrangement of the program, in a few cases, has aided the superintendent in preserving the salary schedule.

I have found that nearly all of the superintendents are well versed in the distribution of school costs. The budgets have been well pre-

pared and are being checked closely throughout the year. Occasionally, however, a poor distribution of school funds is found between the high schools and the elementary school. Not long ago, I visited a school of some size where the high-school per-capita cost was more than \$250, or three times the elementary-school cost. I have also found unduly large classes in the elementary schools. There are occasions, also, where the school program is too comprehensive for the number of pupils enrolled and the teachers employed.

Better Use of Principal's Time

Another feature of administration which should be mentioned is the failure, on the part of principals and superintendents, to use their own time to the best advantage. Recently, I was in a superintendent's office for approximately one hour. During that time he had calls about automobile-tire repairs, finding the custodian, getting a key to turn on the water for the lawn sprinklers, helping a boy with a geometry problem, and fixing the mimeograph. This particular school, as would be expected, showed the need of his best efforts in the supervision of instruction.

Greater care should be given by principals and superintendents to make their offices attractive and inspirational to teachers, students and patrons. The office appearance and the spirit generated by the clerk in charge often give a reliable index as to the general character of the work being done in the school.

B. *Supervised Study.* There were 69 schools in the State of Washington in 1929-30 operating on the lengthened period, or supervised study, plan. This year 119 schools were administered on this basis. Next year additional schools expect to make the change. The supervised study plan is being adopted because the principals and superintendents feel it will help to improve instruction and afford the opportunity of making the work a greater challenge to the pupils. Bringing about this change of organization necessitates a considerable amount of direction and help to the teachers. I have found some excellent professional programs being carried on in the schools and many of the teachers expect to take special courses in the summer schools.

Guidance Advisable

C. *Pupil Personnel.* In a questionnaire recently submitted to a number of university freshmen regarding the help or advice they received in selecting the course they are now pursuing, it was ascertained that very few received any constructive assistance from their respective high schools before coming to the university. Naturally, this lack of assistance has added to the number of pupil failures in higher institutions of learning and has resulted in a loss to the state in its educational investment. Suggestions are being made that each of the high schools make a close study of the pupils during the entire four years of attendance. A personnel folder is being used in some of the schools that contains such information as pupil's intelligence quotient, scholarship, special aptitudes, types of activities in which he is interested, outside contacts, and such other data as will be helpful in guiding the pupil through high school and more accurately determine his possibilities, if he has them, for future work in higher institutions of learning.

The personal contacts between pupil and principal add to the general service of the schools to the public. Parents are not slow to appreciate the kindly interest that is taken by the school authorities in the future welfare of their children.



GENERAL VIEW OF KNOX ATHLETIC FIELD, JOHNSTOWN, NEW YORK

A Playground That Achieves Maximum Use

The Knox Athletic Field at Johnstown, N. Y.

The city of Johnstown, N. Y., enjoys the benefits of a school playground which is in service 12 months in the year and which is planned and operated for the maximum benefit of the entire community. This playground is at once the center of school athletics and adult amateur sports as well as the place where in free and organized play all the children may enjoy fresh air and sunshine.

The playground occupies 15 acres of space and is the property of the board of education. One corner will be shortly occupied by a junior high school, and the balance of the plot is entirely devoted to play purposes.

In 1928 Mrs. Charles B. Knox, a public-spirited woman who has been often a public benefactor of the city of Johnstown, sought the opportunity of taking the tract of land which had been bought for school purposes, and of developing it for its present use. The plot was deeded to her by the board of education with the understanding that, when it had been developed from an uneven field into a complete playground, it should be deeded back to the board. On October 1, 1930, Mrs. Knox deeded this fine athletic field to the city on condition that it be used for the benefit of all the children of the community.

The whole field has been developed by a playground designer and landscape architect and beautifully decorated with trees, shrubs, and hedges. It is inclosed on the front with a neat iron fence and an ornamental gateway and with high woven-wire fences on the other three sides. One corner has been left undeveloped for building purposes as indicated above. Another

corner has been developed into a complete football field surrounded by a quarter-mile track and equipped with floodlights for night games and for play on hot summer nights. One side of the football grid has a bleacher constructed

of concrete and large enough to seat 1,200 people.

Another area of the field has been laid out as a baseball diamond. Still another area is paved for roller skating. Not the least interesting sec-



THE PLAY SPACE FOR SMALL CHILDREN IN KNOX ATHLETIC FIELD, JOHNSTOWN, NEW YORK, IS POPULAR THROUGHOUT THE SUMMER



KNOX ATHLETIC FIELD, JOHNSTOWN, NEW YORK, IS FULLY EQUIPPED WITH PROJECTORS ARRANGED FOR NIGHT FOOTBALL

tion of the grounds is given over to play purposes for small children. This is equipped with a wading pool, sand piles, and standard play apparatus.

Practically all the interests of the community in play have been cared for. Seven tennis courts have been located in a special area. A considerable space used during the summer for baseball and free play is equipped so that it can be flooded in the winter as an ice-skating area.

A field house has been erected for the play directors and for shelter during sudden rain storms. This field house is fully equipped with toilets and a general restroom.

The night lighting equipment consists of seventy 1000-watt projectors capable of flooding the entire area with daylight intensity. The field has been pronounced one of the best examples of gridiron illumination in New York state.

The High-School Principal and Public Relations

Herbert R. Dieterich, Department of School Administration, Ohio State University

Only in comparatively recent years has the average school administrator given any particular thought to a definite public-relations policy. The importance of such a policy is generally recognized today by school administrators, and a number of cities have departments organized for the express purpose of developing and maintaining the best possible relations between the public and the schools. Developing and maintaining the best possible relations between the public and its schools depends, first, upon developing and maintaining the best possible school system and second, upon the honest, effective, and straightforward interpretation of that system, its methods, and needs to the public.

The Development of a Program

The development and maintenance of an effective public-relations program rests primarily upon the superintendent. In large cities, the superintendent delegates this responsibility to a staff officer, who organizes and carries out the program. In smaller cities, it is often necessary for the superintendent himself to assume the direct responsibility. In either instance, the high-school principal has an important place to fill. It is the purpose of this paper to discuss the activities of the principal in the promotion of an effective public-relations program. These activities will fall into two fields between which no very definite line can be drawn. They are (1) those activities which are carried out as a part of the organized and coordinated program of the entire system, and (2) those activities which are carried out by the principal and his staff within their own school. As has been said, no clearly defined line of demarcation may be drawn separating the two. Anything which brings a particular school into the public eye, either favorably or unfavorably, reflects, likewise, upon the system as a whole.

The discussion is further limited to a continuous presentation of publicity material, which endeavors to bring to the people a constant flow of information concerning their schools. This is opposed to periodic or spasmodic presentation of information for the purpose of achieving an immediate end, such as a bond campaign. When school officials have kept the public continuously informed as to the aims, accomplishments, and needs of the schools, it is seldom that an intensive campaign of publicity is needed in order to attain a worthy purpose.

In a well-organized public-relations department of a city school system there will be a constant stream of logically organized facts reaching the public. Whether this department is headed by a staff officer, or the superintendent himself, either will want and need certain pertinent information from every school in the city. This information must come from the principal, or from someone whom he has delegated. In either case the information must be collected and put in usable form. Often it is necessary for the principal to interpret data which have been collected for the central office, in order that the central office, in turn, may use it to the best advantage in its presentation.

Most of the data collected from the high school by the central office will be recorded on special or regular reports. Here the principal has the obligation to see that such reports are rendered promptly and accurately. If the central office is making a study of child accounting, for instance, all data requested should be forwarded as soon as possible in order to expedite their compilation and arrangement in that office.

The Principal's Annual Report

An important and too often neglected report which affords excellent opportunity for high-

school publicity is the principal's annual report. From this should come much valuable material for the report of the superintendent, or that of the school board. The principal's report should aim to give a true picture of the year's work, with particular attention to phases which deserve special mention because of outstanding accomplishment, or which are hampered because of particular needs. Such topics as "Attendance and Punctuality," "Faculty Meetings," "School Clubs," "School Publications," "Athletics," "Student Council," "Assemblies," "School Cafeteria," "Supervised Study," and "English Department," are suggestive of much which could be included in the principal's annual report. The items to be included would be governed in a large measure by the local situation. The report should be written in an interesting and non-technical manner.

This report affords one of the best funds of information concerning the high school for the superintendent and the publicity department, as well as the patrons of the school. Every high-school principal should make such a report if for no other reason than that he may better evaluate the year's work. This, however, is one of the least of its possibilities for good.

The report should be mimeographed. While it may be impossible to present each patron with a copy of the report, a sufficient number of copies should be made so that those particularly interested could be supplied.

In the interpretation of the school to the community which it serves, the principal has his greatest opportunity. With a principal in each school in a city who is alive to the purposes, the methods, the hopes, and the needs of his own school and who still has the broader perspective, that of the good of the entire school system, a great deal can be done.

The various channels through which information concerning a school may reach the public may be listed as follows: the school building and grounds, the pupils, the school staff, the school publications, city newspapers, school activities, such as exhibits, school nights, programs and athletics, social clubs, and public addresses. There are three ways by which information may reach the public. One method, that used by the pupils, is largely word-of-mouth; another, that used by publications is, of course, the printed word; while, the third, that of exhibits or attractive buildings and grounds is unspoken or unwritten. No attempt has been made to list these sources of information in the order of their importance and if such attempt were made it would rightly meet with disagreement, for the importance of the channel may vary with the community.

An attractive school building and a well-landscaped lawn attract immediate attention. Certainly we need a large part of any school ground for play, but there is a very definite place for flowers, shrubs, and grass on the school ground. The condition of the ground reflects upon the principal as the condition of the house reflects upon the housewife. While the principal may be unable to do very much, if anything, in the way of adding to the beauty of the building, he can certainly do much to add to the attractiveness of the grounds. In one school, known to the writer, the members of the National Honor Society sponsored the landscaping of the school grounds. The organization presented a plan to the student body and the necessary funds were raised by each student contributing one penny each week. The local landscape architect advised with the group without charge and the florist sold the shrubbery and flowers at cost. Often a board of education which has been

negligent in this respect is willing to spend some money on the beautification of the school grounds. The principal is responsible for seeing that the building and grounds are favorable silent contributors to school publicity.

The Pupil as the Channel of Publicity

The most immediate, and in many respects, the most important channel for school publicity is the pupil. The wise principal knows that the parents learn much concerning the school from the children. Publicity favorable or unfavorable begins the first day of school. Pupils are impressed with the manner of starting the year, particularly if the principal should be new. The efficiency with which the principal organizes the school for the first day and the first impression of the pupils are vital factors in launching an effective public-relations program. Parents are anxious to hear how school is beginning in the fall and the pupils will be quick to reveal the true conditions.

While a good beginning is highly important, it is no more important than an efficient continuation. The relations of the principal and his staff with the pupils are constant topics of conversation and hence, continuous means of school publicity. A school organization built upon democratic principles, and a principal and a faculty who deal fairly and effectively with pupils in all things are most excellent means of favorable school publicity.

The Faculty as the Channel of Publicity

Not only must the principal consider the pupils in his public-relations program, but he must also take clearly into account his faculty. The faculty, too, are impressed with the beginning of school. They are, however, more concerned with the remainder of the year. The principal who carries his faculty with him by keeping them informed has done much to win their support. A teacher's handbook containing the rules and regulations of the board of education, information concerning routine duties, and other material of importance is one means of informing the teacher. A loose-leaf notebook in which to keep copies of the minutes of faculty meetings or any other information which is given to the teachers to be preserved for future reference may be used effectively.

Important as such written or printed matter may be, it is even less important than the human contacts between the principal and his staff in building up a public-relations program. The principal's broad sympathy, just dealings, and fine understanding can do more in securing the cooperation and good will of the faculty and likewise their support of his program, than anything else. Too often principals fail in these personal contacts, and then wonder why the faculty fail to support the program even though they have been informed by bulletins from the office.

School Publications in the Program

School publications have a prominent part in any public-relations program. A well-organized and comprehensive students' handbook can offer a great deal of information to new students and their parents. The school newspaper which gives a true picture of the school's activities is a valuable method of disseminating information to both pupils and parents. An attractive school paper is good advertising, and one which has as its ideal the interpretation of the school, its purposes, its methods, and its needs, can be a potent force for the good of the schools. The principal, through a special column may present and interpret certain salient facts each issue. The goal of the school should be 100-per-cent subscription

on the part of the student body and the price should be set with that in view. A "take your paper home" campaign conducted by the paper will add materially to the number of readers.

The school annual and the school magazine have a place in a public-relations program of much less importance than a newspaper or handbook. Both should reflect credit upon the institution and its personnel. An expensive annual has very little place in the school's undertakings. The price of the annual is too often prohibitive to many students who might buy a less expensive book. For a high school of less than three hundred, a mimeographed annual with pictures made, and work done by the students, offers an economic solution. For larger schools, less elaborate covers, fewer cuts, and better utilization of space should be considered. The principal should carefully supervise the publications of the school.

Coöperation With the Local Newspaper

No well-planned program of public relations can neglect that most important agent in forming public opinion, the city newspaper. Newspapers devote columns of space each week to school news. The administrator must coöperate with the press, if he expects coöperation from the press. Reporters are desirous of getting things first hand and, if certain parts of the school system are closed to their inspection, or if the administrator attempts to dictate the school news which should be printed, he will soon find himself opposed rather than supported in his school program.

Newspapermen know what is of most interest to readers and will wish to visit schools and classrooms to find that news which is of most interest to the parent and the general public. The "open-door policy" will win and hold the coöperation of the newspapers. Certainly there are times when the papers will ask the administrator for his interpretation of technical material, the administrator is rightfully concerned that such material be interpreted adequately and accurately, but he cannot dictate to the newspapers what they shall or shall not print. The wise principal coöperates courteously with the newspaper staff not only in order that the school may receive publicity, but that the public may receive the news as well.

The Exhibit as a Factor

There are certain activities sponsored by the school which are powerful factors in a public-relations program. One of the most important is the exhibit. School exhibits held near the close of the year, or at other times, afford an opportunity for interested patrons to see what the pupils have accomplished. These exhibits may be departmental, or they may include the work of all departments. The work may be put on display in a prominent place outside the school building, such as a store window, or it may be held in the school building. All things being equal, it is most desirable to have the work of all departments on display at the same time, and in the school building. This brings patrons to the school and gives them the broader acquaintance with schoolwork.

School nights with special invitations to patrons to visit are effective. Usually two full-length periods with regular classes are scheduled in the evening so that parents may visit the classrooms of their children. A short program followed by light refreshments add to the attraction. The amount of interest and favorable comment that may be aroused in a community by a well-planned school night is usually sufficient to justify the slight disruption of regular routine.

School programs, literary, dramatic or musical, and athletics are factors which must be considered in the public-relations program. Too often a school may stress one to the neglect of

all others. The ideal is a balanced, well-planned program, spreading over the entire year and giving due emphasis to each activity and over-emphasis to none.

Social Contacts of the School Staff

The social contacts of the principal and his staff, through various luncheon clubs, or organizations of a purely social nature, offer opportunities for the development of public relations. Certainly it is not good taste to continually "talk shop," but there are, oftentimes, opportunities for one who is acquainted with the facts to interpret them to a group whose influence is beneficial. Even though one is not called upon to interpret the schools to such organizations directly, the value of social contacts cannot be denied. The school, whose principal or members of the faculty fail to take advantage and make the best of some of these opportunities for social contacts, is losing this important method of school publicity.

A high-school principal who is able to speak publicly has opportunities to present certain phases of school activity by this means. The parent-teacher organization, the mothers' club, the luncheon clubs, and other similar organizations frequently will call upon him for talks or

addresses. Too often opportunities for interpreting the school are lost through poor selection of material, or lack of preparation on the part of the speaker. Every effort should be made to present any subject in an interesting and instructive manner. The principal who cultivates the ability to speak before such groups, and who accepts opportunities to speak, can go far in establishing cordial relations between the organization and the school. The principal should not, however, allow such engagements so to consume his time and energy that he cannot give his best efforts to the administration of the school.

In conclusion, it may be said that the principal holds a place of fundamental importance in developing public relations. As a leader of his school he is held responsible for coöperating with the central office on the development and prosecution of a city-wide program, as well as developing and maintaining the best possible relations between his school and its immediate community. Too often principals have neglected this phase of their work. There are various channels through which information may reach the public, and it is the responsibility of the high-school principal to make the most effective use of each of these in developing a program of public relations.

A Study in Pupil Costs of Buildings

Jesse J. Pugh

There is a notion prevalent with the general public that the retail store situated on a back street is by reason of its location subject to less expense for rent, and can therefore supply its customers with goods at less cost than the prepossessing store on the main street of the city. Many a small merchant, innocently or otherwise, has used this reasoning to advantage when competing with his more successful rival. But little does the unsuspecting customer realize, when appealed to by such an argument, that the rent on each unit of goods may be actually more in the case of the out-of-the-way shop than in the downtown store with all its advantages of location and convenience.

It is in the same light that the public often regards the cost of school buildings. The whole cost of the building with its immense figures is frequently all that receives consideration. But the informed schoolman knows, as does the wise business man, that total numbers do not tell the whole story. Just as the cost of operating the store should be based upon the units of merchandise, so the cost of the school building should be based upon the number of pupils accommodated. And just as the store is built to care for a certain amount of merchandise, so should the school building be erected for a certain number of pupils. In any school a deficit in the numbers accommodated will mean a loss in return on the capital invested.

Department Costs Important

A matter which to the business man is quite as important as the unit cost of the entire establishment is the cost of each and every department. Likewise, it is important to the school administrator to know the unit costs as they apply to every department and room of the school building. Which departments show the greatest pupil cost? Which show losses on the capital invested in them? Is the loss in any case too great to justify the investment? The answers are to be found by studying the pupil costs in places where such information is desired.

A few studies have been made of the pupil cost of school buildings, with the result that much variation was found in the different buildings considered. Hull¹ found the cost of school

buildings in Denver, Colorado, to range from \$169 to \$324 per pupil, and the mean for several cities to be \$392. In a similar study McCormack² found the pupil cost to range from \$355 to \$515.

This article attempts to describe how the pupil cost was determined in the case of a given school building, with reference not only to the buildings as a whole, but also the separate rooms and departments. The building taken for the study is one of the new junior high schools located at Z—. The building was erected in 1924 at a cost, including its equipment, of approximately \$268,000. The cost per cubic foot was 40 cents. The cost per pupil enrolled on the basis of the average annual enrollment since the building was opened was found to be \$460.89, a cost rather high in the scale established by the previous studies.

The Facts of One Building

By way of getting at the main purpose of the study, it was first necessary to make a study of the utilization of the building. Table I shows the results of this study. In column 1 are the rooms of the building, the classrooms being distinguished by numbers. In column 2 is shown the "Period Capacity" of each room. By this is meant the number of pupils the room is capable of accommodating at a single period as determined by the seats or working places. Obtaining the period capacity was a matter of simple reckoning in the case of the classrooms and practically all the special rooms. But with the gymnasium and lunchrooms it was necessary to use an arbitrary standard, one based upon the greatest number who, it was thought, could conveniently use the room at one time.

In column 4 are presented the most important data of the table. The numbers herein represent the actual numbers of pupils sitting in each classroom at the particular periods indicated. For example, Room 10 has 39 present in the first period every day of the week, 27 during the second period on every day but Monday, and so on. Column 5, headed "Weekly Use," indicates the total number of pupils present during all periods of the week; in other words, the sum of all items under column 4.

²McCormack, W. R., "Excessive School Building Costs," SCHOOL BOARD JOURNAL, 75 (1927), p. 51.
(Continued on Page 104)

¹Hull, O. R., "The Administration of School Building Programs," SCHOOL BOARD JOURNAL, 72 (1926), p. 61.

Suggestion and Its Relationship to Supervision

Prof. Edwin J. Brown, Emporia, Kansas

Suggestion might be defined in a popular way as the spontaneous calling up of an idea in the mind by a connected idea. In some form or other it has become an important factor in all walks of modern life whether it be in the shop display window, in billboard advertising, in creating a desirable atmosphere in the sickroom, in checking or even curing functional disorders, in getting desired information before a jury despite a stern judge's ruling, in building the carefully worked-out fake play in football, in winning an umpire's decision on a close play at second base, in hypnotism, in getting a tired baby to do one's will or—in getting a hard-working teacher to improve her instruction without her ever being conscious that she has received any help from any outside source.

For the principal or superintendent who finds difficulty in cutting his teaching schedule and his administrative work to the point that he has time for adequate supervision there seems to be much that he may do in improving instruction, which, after all, is supervision, by means of suggestion. The writer feels that altogether too frequently the principal concludes that he is failing in his work as a supervisor unless he makes frequent and regular visits to the classroom of each teacher. While such visits are certainly a desirable phase of supervision, yet there is much that the principal who supervises can do to aid instruction, to improve the general tone of his school, to build up a feeling of unity, which is not dependent upon classroom visitation, teachers' meetings, or any of the commonly recognized adjuncts of supervision.

Reading Professional Literature

There is likely no single activity of the teacher which brings larger returns in improved instruction and in professional advancement in general, than the reading of professional works. The statement is so true that it is almost axiomatic. Principals recognize the value of such reading as do teachers. Cubberly¹ says: "To keep his teachers professionally alert and his school a sort of continuation professional school ought to be one of the highest ambitions of the school principal. To be able to stimulate teachers to think and from thinking to want to read, is the clear mark of a professional leader." There are few principals, however, who have not experienced considerable disappointment when they have gone directly to teachers and have asked them to read certain professional magazine articles or books. There is something about the whole procedure which harks back to elementary-school days when reading assignments were made in certain textbooks.

The question which arises is whether there may not be some indirect method of getting the best of the professional reading material to the teacher without having her feel that she has had a reading assignment made her or that she must read the book or be "in bad" with the principal. The following "suggestions" for arousing this interest are offered for what they are worth:

1. The principal places a half dozen of his best and more recent professional books on a public shelf in his office or elsewhere with a "check-out" card provided for each book. He asks that each teacher contribute one or two of her best books or magazines for the common use of all.

2. The devotion of one faculty meeting a month to the review of a recent professional book, or half a dozen professional articles dealing directly with general-interest problems.

3. The casual mention of a good professional book to several teachers after having placed it on the "bait shelf."

4. Reading a challenging selected extract (preferably one which disagrees with common practice) from a recent book at a teachers' meeting.

5. Asking a teacher for her opinion on certain marked selected passages in a book or magazine article which the teacher might profit by reading.

6. Creating a general reading interest by encouraging the school library to purchase the most recent novels, and by allowing teachers the first privilege of checking these out on a limited-time basis.

Attendance at Summer Sessions

This is another phase of the improvement of the teacher in service which apparently gets the best results when it is brought about by indirect rather than by compulsory methods. Some one of the following "suggestions" might be the means of converting the self-complacent teacher to the utility, pleasures, and desirability of summer-school attendance:

1. Placing summer-session catalogs in the library, on office tables, and in public rooms. See that summer-session posters from colleges and universities get space on the bulletin boards.

2. Encourage the board of education to offer substantial salary raises to teachers who attend two or more summer sessions in succession.

3. Supply each teacher with a copy of a good self-rating scale. This calls to her attention the emphasis that is placed on summer-session attendance by educational authorities.

4. Mention under the topic of "Advancement Made in the School" the attendance of teachers at summer sessions. This may be done at the first meeting in the fall or through the regular bulletin announcements.

5. Ask opinions of teachers who have been in summer-school attendance regarding recent educational developments. Do this at teachers' meetings occasionally. Let other teachers know that you consider the teacher who is doing graduate work in summer sessions to be more authoritative on recent developments than are those who fail to attend.

6. Mention a particular course which is to be offered or a prominent professor who is to teach at some recognized institution near by.

7. Mention occasionally the social advantages which accrue from attendance at famous institutions.

8. Mention the ease with which pleasure in the form of a summer vacation may be combined with summer-school attendance and the subsequent professional advancement.

The Development of a Professional Attitude

The writer believes that the development of a professional attitude or spirit is likely to be a spontaneous thing. He is quite sure that he knows teachers who have taught for years that are totally lacking in this desirable attribute; he is equally sure that he has met some very young teachers who are decidedly professional in their viewpoints. With a view to getting the opinions of prominent educators as to what they believed was the deciding factor in making them feel that they had "arrived" professionally, whether they had or not, this question was put to six nationally known educators during the past year. While more than one item was mentioned frequently, all of the persons questioned mentioned one or more of these items:

1. Publishing an article in a professional magazine.

2. Speaking on a professional program.

3. Completion of an original study on some educational subject.

4. Being asked to demonstrate a method of teaching procedure before a group of teachers with the understanding that they were asked because of excellence in this particular phase of teaching.

5. By having a suggestion which they had made for improving a school situation be put into practice and the results be gratifying to all.

With these items in mind might not the busy supervising principal find that he was building up a professional attitude were he to try some one or all of these suggestions?

1. Ask a teacher's permission to bring another teacher or the superintendent to see her teach some subject or demonstrate some work that she does well, whether it be exceptionally well done or not. Do this for every teacher on the staff.

2. Plan a system of cross-visitation that every teacher may visit professionally every other teacher in the building. Plan this work that the best teacher of any subject will be hostess to other teachers who are not especially strong in that subject.

3. Aid and encourage teachers in setting up experiments in their classrooms; the writing up of the results of the experiments for publication may be edited by the principal but should be published under the teacher's name.

4. Place the best teachers on state and county committees and programs.

5. Mention especially fine work of teachers when speaking to patrons.

The Improvement of Discipline

Almack and Lang² make the statement that "approximately a fourth of the failures among teachers are directly due to weaknesses in discipline." This statement emphasizes the need for attention at this point by the supervising principal. Anything or any item which causes one fourth of the failures among our teachers must be one of the supervisory objectives for every person concerned with the improvement of the teacher in service. Here again, direct methods are apt to be of little or no avail. Whether it is possible to improve the work of a teacher in this fundamental item by more subtle methods remains to be tried. Some one of the following "suggestions" may be helpful:

1. The principal or supervisor may aid in creating a desirable playground attitude on the part of teachers by being seen frequently on the playground. Teachers are likely to take this "suggestion."

2. Appointment of a teacher who is weak in discipline on the discipline committee.

3. The development of a written code of school regulations made up of suggestions from all teachers, may tend to make the teacher weak in discipline see her weakness.

4. The principal's observation while visiting a classroom may enable him to suggest changes in classroom mechanics which tend to lessen the discipline problem in that room.

Neatness and Modesty in Dress

This is a phase of the personal and social qualities of supervision that is always important, but which can be handled successfully only by the indirect method. To tell a woman that her attire is unbecoming is about the surest way to win her dislike that can be imagined. The writer believes that better results can be obtained by "The spontaneous calling up of an idea in the mind by a connected idea":

1. Place a teacher who dresses appropriately and pleasingly in the room next to one who fails to dress in harmony with her position.

2. Place a teacher who speaks with a well-

¹The Principal and His School, 1923, p. 477.

²The Beginning Teacher, 1928.

modulated voice in a room next to one who speaks loudly or shrilly.

3. Mention in a general meeting the desirability of appropriate dress in the schoolroom.

4. When the offending teacher does dress appropriately, do not lose the opportunity of letting her know without implying that she has dressed inappropriately at other times, that her attire is especially pleasing.

5. Set a good example. If you are careless your teachers tend to be.

The Promotion of Good Health in the Teaching Staff

Too often the principal is inclined to the belief that the health of his teachers is outside of his field of influence, but that the health of the pupils is to be considered by him as a part of his work. In assuming the former he is certainly wrong. Anything which tends to make the teacher ineffective is within his jurisdiction. That poor health tends to ineffectiveness goes without saying. The writer of this article is not attempting to cover all of the fields in which supervision lies, which in a general way may be summed up under the heads of: Improving morale and professional spirit, evaluating teaching, inspection, curriculum development, the improvement of teachers in service, and the improvement of classroom instruction and management. Rather, he is trying to select those particular subdivisions of the above-named general fields which are most amenable to treatment by an indirect method. In the promotion of his health program, the supervisor finds that there is much that he can do to keep the enthusiasm and energy which were so evident in September, vitally alive and active in May:

1. The establishment of an efficient health examination for every member of the teaching staff.

2. The establishment of medical attention for all teachers, when needed, by some coöperative plan.

3. A thorough accounting of all absences of teachers from work due to ill health. This record

for each teacher includes the amount of absence, the cause, nature of the illness, whether medical attention was secured, and a comparison of this record with the physician's examination record.

4. The adoption of measures that will guarantee a distribution of teachers among lines of work that are most congenial to personal temperament, training, and taste, and therefore less injurious to physical and mental health.

5. The improvement of general administrative action so that the demands of a constantly changing school system shall be transmitted to the teacher with due regard to the personal equation in effective workmanship.

6. The hearty encouragement of an intelligent appreciation on the part of the patrons of the school that teachers, because they are in a business that is very exhausting on both physical and nervous energy, are entitled to a normal, restful, and recreational personal and social life.

7. The development of a carefully worked-out self-inspection card for teachers dealing with items pertaining directly to health efficiency.

In conclusion, attention should be called to some of the difficulties which surround the supervisor, difficulties which demand an indirect method of attack if the work is to be effectively done. First, the supervisor works at very close range. Supervision is always a shared-relationship job. Second, there is no possibility of separating the personal and social qualities of the supervisor from his methods and principles, in other words, taking the personal element out of his work. Since much of his work, probably most of it, must be done by a direct, open attack on it, the items which cannot be attacked successfully directly, are apt to be items which affect very much the success of the work which is best open to direct methods. Last of all, it is only through supervision that the work of all the teachers can be coöordinated with the philosophy which directs the entire school, in fact, on which the school is built. Much of this philosophy must be caught, rather than taught, which "suggests" again the value of the indirect method of attack.



G. E. ROUDEBUSH
Superintendent of Schools,
Youngstown, Ohio

Mr. Roudebush, who was elected superintendent of schools at Youngstown, Ohio, on July 11, is well known in Columbus, where he has served for the past four years as assistant superintendent in charge of business affairs of the schools. He is a graduate of Ohio and Columbia Universities and holds two degrees given by Indiana University. Previous to going to Columbus, Mr. Roudebush was a principal for four years at Lima, three years at Middletown, and was superintendent of a centralized school near Cincinnati. From 1919 to 1924 he was superintendent of the Hancock county schools, leaving to become superintendent at Kentland. He became assistant state superintendent of public instruction in 1926, serving until the expiration of the term of Dr. Sherwood.

sociated School Boards and Trustees of the State of New York, wrote: "The thoroughly capable supervising principal, who is competent to administer all of the educational policies of a board, should be granted power and the authority to execute all the resolutions and policies pertaining to the entire school plant and educational program. Seventy-five per cent of the school boards in New York state give their supervising principal full authority to perform the usual functions of a superintendent; that is, he is authorized to serve as the executive officer of the board."

The education committee of the Eastchester board of education in response to the inquiry laid down the following administration principles:

"In order to effectively conduct a school system, we advocate following certain fundamental, basic school-administration principles, for upon the observance or nonobservance of these principles will depend the success or failure of our school system.

"The first and possibly the most important principle which we advocate, and which we have tried to follow, is that our supervising principal should have the same authority which is usually granted to the superintendent of schools. On this point, we are sustained by excellent authority.

"Our next and also important contention is that our supervising principal or superintendent, should be recognized as the executive head of our school system, as the educational expert, and as such, he should have full direction and supervision of our entire school system. On this point we are also sustained by excellent authority.

"In order that no one can misunderstand our position on this very essential and basic principle, we wish to state that we take the same view regarding our supervising principal as we do regarding our attorney. Both are specialists in their chosen fields. As they are employees of our board, their recommendations are not binding on any member or members who may feel that the advice given is not sound. However, any board member or members would, in our opinion, be following an unwise course should they ignore the advice of our attorney without

(Concluded on Page 129)

Shall the Supervising Principal Act as the Chief School Executive of Small Towns?

In the rural sections of New York state the so-called supervising principal of one or more schools in a township is vested with the prerogatives and powers which ordinarily apply to a superintendent of schools. In school districts where a one-teacher school is maintained, the sole control is in hands of the school trustees. The tendency is not to relinquish that control even where a district maintains two or more schools.

In the town of Eastchester, New York, a supervising principal is employed. During the past year the town board of education engaged in discussions as to the relations which that body should bear to its supervising principal. At times it was feared that this official enjoyed too much authority.

President John J. White, of the board of education, instituted an inquiry into the subject with the view of obtaining authoritative information as to what the status of the supervising principal ought to be. He soon discovered that there was no difference between a superintendent of schools and a supervising principal. John W. Withers, dean of the New York University, said:

"The superintendent of schools, or supervising principal, or whatever title you call it, should be the chief officer of the board of education with respect to two important functions. He should be the chief advisory officer of the board of education and of the community with reference to matters of education; and he should be

the chief executive officer of the board in carrying into effect as efficiently and economically as possible whatever policy or program the board of education, under his advice, may have decided upon.

"The board of education is a lay body, chosen by the people to represent them in the administration of their public schools. As a lay body it should be as truly representative of the entire community as possible in every one of its fundamental interests. It should be a body that understands the community in its various activities and interests, in its economic and social life, and in its general psychology."

In response to President White's inquiry the editor of a school-administration journal said:

"The supervising principal, as he is called in some communities, is what is generally known as the superintendent of schools. The modern school superintendent is given a wide range of authority and then is held responsible for results. He must have the initiative in the selection of teachers, adoption of textbooks, preparation of a course of study, and in fact all departures of an educational character, subject to the approval of the board of education.

"The modern board of education confines itself to the financial policies and the general control of the school system. It does not pretend to interfere with the strictly professional service. This belongs within the province of the supervising principal."

W. A. Clifford, executive secretary of the As-

The Payment of Tuition in the Public Schools

Crawford Greene

Well-equipped schools in the centers of population, coupled with better transportation facilities and a widespread desire for education, are attracting many pupils from communities where educational opportunities are limited, thus creating a problem for the recipient schools. In some instances, so numerous have become the newcomers that housing problems have resulted, while the financial burden of these "guest" pupils is a potent factor in the fiscal system of the school district. The purpose of this paper is to make a cursory examination of the legal aspects of the program.

The public schools are a product of constitutional provision coupled with legislative enactment. Usually, the former provides for the establishment of a system of free schools, while the duty of the legislature is to enact the laws by means of which the system may be inaugurated.

Tuition is the charge made for the privilege of attending a school and enjoying the rights and benefits thereof. Since the public schools exist under constitutional and statutory power, the power to charge for attendance therein must rest in the constitution or be granted by the lawmaking body. As tuition is contrariwise to the free system of schools usually proposed in the various state constitutions, it is considered illegal unless applied under conditions obviously not in conflict with the provisions of the constitutionally established "free school system."

The usual system of free schools is maintained chiefly upon a basis of local support and not upon a state-wide or state-supported plan, although the state generally assists the school in a financial way. The school, being substantially a local institution from the standpoint of its chief source of support, has the inherent right to exclude all who are not residents of the community from enjoying the benefits of the school unless they contribute to its support. Since the school systems have not yet been developed to a point of equal opportunity for all, the neglected persons must seek their schooling elsewhere, and, as a result, the aforementioned problem is confronting many schools today. In order to meet the situation the legislatures generally have provided for the payment of tuition by nonresident pupils or by their home districts for the support of the schools which they attend. This situation has produced many complex cases, a number of which have been taken to the higher courts in an effort to determine who is entitled to free attendance at the schools of a district. Merely being the citizen of a state does not give the privilege of free tuition to any school within the state, nor can a person demand admission as a pupil in any school merely because of his being a citizen of the United States, as the privilege accorded a child as the citizen of a state to attend the public schools of his district is not a privilege appertaining to the child as a citizen of the United States.¹

Liability for Tuition

The tuition laws often have not made clear the provisions by which pupils may be charged for the privilege of school attendance. The majority of the contentions center around "residence and the right to attend" rather than on the amount of the charge, which is often left to the discretion of the school board.

¹Lehew v. Brummell, 103 Mo. 546, 15 S. W. 675; 23 A. S. R. 895, 11 L. R. A. 828. Notes: 14 L. R. A. 581; 3 Ann. Cas. 693.

Pupils fall into two groups as regards tuition, the resident and the nonresident. The state constitution usually protects the resident by such provisions as "the state shall ever maintain a general, suitable and efficient system of schools, whereby all persons in the state between the ages of 6 and 21 years may receive gratuitous instruction." In such cases free attendance is mandatory. However, if the constitution reads "the legislature shall provide as soon as practical for a system of free schools," the provision is merely directory. According to Trussler² "unless the constitution is mandatory, its requirements are suspended until the whole scheme recommended by the constitution is adopted by the legislature." It might be possible for the public schools to operate on a tuition basis in a state where the constitution so provided.

It is generally recognized that pupils legally residing in a school district have the privilege of free tuition in the schools of that district. A specific case of this type arose in Arkansas³ in which the court held as unconstitutional certain legislative acts empowering the school district to charge tuition at the discretion of the school board. The court stated that the terms "public schools" or "common schools" were used in the constitution to denote that such schools were open to all persons within the approved ages and do not indicate the grade of the school or what may or may not be taught therein. A previous Arkansas court had stated that: "There is a constant effort to raise the standard of education, and, happily for the people of our state, the effort has not failed to meet with a considerable measure of success. The establishment of the high school is within the limits of common-school education because it merely raises the standard of popular education. High schools are free schools within the meaning of the constitution, and also common schools with the meaning of that term as used."⁴

In a Georgia case the court held that "a district could not lawfully require a matriculation fee from children of school age residing in a municipality, who are otherwise qualified, as a condition to their admission to the common school department of such school."⁵

On the other hand, the school district usually has the right to charge tuition to nonresident pupils, it being deemed fair and just that a pupil from without a school district should contribute to the cost of the instruction from which he derives a benefit.

Determining Residence

Whether or not a pupil is eligible to free tuition usually rests upon the supposedly simple matter of residence, yet most of the cases that find their way into the courts center upon contentions as to residence. So complex is the subject of "What Constitutes Residence" that *Ruling Case Law*⁶ devotes several pages to it, part of which is here quoted: "Although there is some conflict among the decisions as to what constitutes residence which will entitle a child to school privileges, statutes providing for a free public-school system are, by weight of authority, construed as evidencing an intention on the part of the state that all children within

²Trussler, H. R., *Essentials of School Law*, Bruce Publishing Co., Milwaukee, 1927, p. 164.

³Special School District No. 65, Logan City v. Bangs, 144 Ark. 34, 221 S. W. 1060.

⁴Dickinson, State Auditor, v. Edmondson, 120 Ark. 80, 178 S. W. 930; Ann. Cas. 1917 C, 913.

⁵Brewer et al. v. Ray, 149 Ga. 596, 101 S. E. 667.

⁶*Ruling Case Law*, Vol. 24, pages 624-26.

the borders shall enjoy the opportunity of free education.⁷ In determining whether a person is or is not a resident in a school district, within the meaning of such a rule, the usual and ordinary indicia⁸ of residence or absence thereof should be the proper guide. In line with the construction of the statutes, residence entitling an infant to school privileges is distinguished from domicile or the technical and narrow use of the term 'residence,' for the purpose of suffrage or like purposes, and it is construed in a literal sense as meaning to live in, or be an inhabitant of, a school district,⁹ the purpose being not to debar from school privileges any child of school age found within the district under the care, custody, or control of a resident thereof.¹⁰

"Such a rule usually does not require that there be a legal domicile, but it is sufficient if the child or its parents, or the person *in loco parentis*, are actually resident in the district, with apparently no purpose of removal. But other cases have held the term 'residence' as used in the school statutes to be equivalent to the word 'domicile' (see last citation).

"For school purposes a child's residence is not necessarily the residence of its parent or parents, though generally a child will be held to reside where its parents reside.¹¹ If it has assumed a permanent home with some other person, the school residence is with such person.¹²

"But in some cases it has been held that a child living in a district apart from its parents is not a resident thereof for educational purposes unless legally adopted by the person with whom it lives, even though the arrangement has every appearance of permanency.¹³ And in some cases it is expressly provided by statute that the residence of the child for school purposes shall be deemed to be the residence of the parents or guardian."¹⁴

It has been held¹⁵ that temporary residence on the part of the parent for school purposes in a district in which the parent is not a bona fide resident, does not give the right of free tuition, yet the recency of residence has no bearing on the matter if there is the intention of permanent residence.¹⁶ However, in a Michigan case¹⁷ it was held that a parent may acquire residence in one school district entitling his children to free school privileges, while retaining legal domicile in another.

Residence of Institutionalized Children

There have been various opinions rendered as to the legality of residence of children in orphan's homes, poorhouses, and other institutions or where the child has been committed on probation by a court. Generally, the children in institutions are held not entitled to free tuition.

⁷Notes: 36 L. R. A. (N. S.) 341; Ann. Cas. 1915 C, 791.

⁸Stanford Graded Common School District v. Powell, 145 Ky. 93, 140 S. W. 67; Ann. Cas. 1913 B, 1016; 36 L. R. A. (N. S.) 341. Note: 3 Ann. Cas. 694.

⁹Notes: 34 L. R. A. (N. S.) 341; Ann. Cas. 1915 C, 791.

¹⁰Notes: 36 L. R. A. (N. S.) 341; 51 L. R. A. (N. S.) 234.

¹¹Black v. Graham, 238 Pa. St. 381, 86 Atl. 266; 44 L. R. A. (N. S.) 693 (See "Domicile" 9 R. C. L. 547).

¹²Ann. Cas. 1915 C, 791.

¹³Board of Education v. Foster, 116 Ky. 484, 76 S. W. 354; 3 Ann. Cas. 692 and note.

¹⁴Same as No. 11.

¹⁵Notes: 36 L. R. A. (N. S.) 343; 3 Ann. Cas. 694.

¹⁶Note: 3 Ann. Cas. 694.

¹⁷Sch. Dis. No. 1 Fractional of Marcelona Tp. v. Sch. Dis. No. 1 of Custer Tp., 211 N. W. 60.

tion,¹⁸ it being contended that such institutions do not pay taxes and so do not contribute to the support of the schools. This opinion is not universal as is evidenced by a West Virginia¹⁹ case in which it was held that inmates of a home which was included in territory annexed by a district became entitled to free tuition. Before annexation the children attended the schools of the district and the management paid tuition under a contract "to pay tuition whether the home is or is not in the district." The court held this contract a mere *nudum pactum* which was no longer binding.

In accordance with this view there are several other cases on record in which it is held that children who are inmates of orphans' homes are entitled to free tuition.²⁰

However, in an Ohio case it was held that the district in which the inmates of a children's home attended school is entitled to reimbursement from the district where the inmates had legal residence before becoming inmates.²¹ In New York children living in a boarding house for children were held not to have acquired legal residence apart from their parents, so as to be entitled to free tuition, although the parents presented affidavits that they were unable to maintain a home and had relinquished care of the children.²²

It has been held that the residence of children on probation remains where their parents or guardians reside, this being the case even though they are legally wards of the persons in whose care they are placed.²³ In such cases, the court has held that they are in effect prisoners and are residing only temporarily in the district.²⁴

It is generally held that a child of school age kept by a resident of a school district as if it were his own is entitled to free school privileges; that is to say, a minor may attend school in a district in which the person standing *in loco parentis* resides.²⁵

Loss of Parental Control

This point of view is held in cases of varying types of situations. In Wisconsin a boy, who was emancipated by his father, went into another school district and obtained employment for his support while attending school. It was ruled that the boy became a resident of the adopted school district and was entitled to admission to its high school without the payment of tuition.²⁶ The West Virginia Supreme Court held that a boy over 14, who was working in a coal mine in West Virginia but whose father resided in Virginia, had a right to attend the free schools of West Virginia, and that it was unlawful to employ him in a coal mine while such schools were in session. This was based on the grounds that he had left home and was making his own living.²⁷ Where the mother was dead and the father had given full charge of a child to a sister in Kentucky, it was held that



GEORGE MOULTON DAVIS, JR.
President of the Board of Education,
New Rochelle, New York

Mr. Davis, who is a graduate of the New Rochelle High School and of Dartmouth College, became a member of the New Rochelle board in 1928.

He is a clear thinker on educational questions, has a good knowledge of present-day trends in education, and is in sympathy with what is best in progressive education. Although Mr. Davis is the youngest man ever made President of the New Rochelle Board of Education, he has the sound judgment and administrative skill needed in a position of this kind.

the residence for school purposes is with the sister.²⁸

The New Jersey court is not so liberal in its interpretation of residence regulations where out-of-state persons are concerned. It has held²⁹ that the term "resident" included any person who comes into the state and remains with the intention of making it his permanent abode; but a child who is brought in by a parent or guardian who is a nonresident, for the purpose of receiving an education in the public schools of the state is not a resident, the permanent abode of the father being that of the child. In this same connection it was held that living two years in a place and attending a boarding school did not establish residence for public-school purposes, the court stating that "public policy forbids the admission in public schools of pupils from other states."

It is thus seen that the question of whether a person is or is not a resident of a school district involves many aspects, and it is often necessary for the courts to determine the legal status of a person. In general, however, it seems that the intention of becoming a permanent resident in a community carries with it the privilege of school attendance without charge.

The Rights of Non-Residents

Even though it is the policy of the statutes to impose the expense of educating the children of a district upon the taxpayers of the district, thereby limiting the free attendance to bona fide residents of that district, nonresidents usually are given certain rights.

Many jurisdictions have statutory authority for the transfer of pupils from districts in which they reside to an adjoining district,³⁰ although the usual limitation is to cases where it is more convenient for pupils to attend school in the other district, or where there is no high school in the district in which they reside.³¹ In some cases it is provided that children living within a fixed distance of the boundaries of a district may attend the schools of that district.

²⁸Stanford School District v. Powell, 145 Ky. 93, 140 S. W. 67.

²⁹Mansfield Township Bd. of Ed. v. State Bd. of Ed. et al. 101 N. J. laws 474, 129 Atl. 765.

³⁰Kent v. Town of Kentland, 62 Ind. 291; also 60 Neb. 147, 82 N. W. 380.

³¹Wilkinson v. Lord, 85 Neb. 136, 122 N. W. 699.

Some statutes give a nonresident taxpayer the right to send his children to school in another district in which he pays taxes if he is not easily accessible to the schools of his district.³² Some state codes provide that the amount of such tax may be deducted from the tuition charges imposed by the second district.

The rights of the nonresident have not been so held as to subordinate the power of the district, it usually being understood that admission of nonresidents is left to the discretion of the district authorities. In fact, in Wisconsin a district may admit or reject the nonresident as it sees fit, according to a court ruling.³³ The school board may determine which school a nonresident may attend and make other reasonable regulations.³⁴ However, if the school is open to nonresidents, the terms must be equal to all.³⁵ Where facilities do not warrant the enrollment of additional pupils, the district may take them as a favor and charge extra for the additional expense incurred thereby.³⁶

In contrast to the above view, the Nebraska State Supreme Court held that a district was not justified in refusing to admit qualified nonresident pupils to high school on the payment of the statutory fee as per the law, it being contended that the district was not able to furnish instruction for such a fee.³⁷

A Missouri court has summed up the legal aspect of tuition in one sentence: "It would not be right to permit children living in districts whose taxpayers have neglected or refused to maintain schools to have the benefits, free of charge, of the schools in districts wherein the taxpayers have burdened themselves to erect schoolhouses, employ competent teachers and maintain schools."³⁸

Fees Other than Tuition

Attempts have been made to supplement the funds of some school districts by the imposition of fees upon resident pupils. Where the constitution provides for a "system of free public schools" such regulations have been considered contrary to law. In a case in Georgia it was held that the trustees were empowered to make rules governing the schools and to fix tuition rates for nonresident pupils, but could not charge "matriculation" fees for resident students attending schools receiving state aid. It was contended that the power to fix the school term does not authorize the trustees to charge such fees for resident students.³⁹

In an early Kentucky case the district was upheld in its power to impose tuition for subjects not in the prescribed course of study.⁴⁰ The expansion of the curriculum, no doubt, has modified this ability.

In an interesting Georgia case the rights of the parents were protected by the court. It was held that under the constitution the parents have the right to mandamus the school authorities to admit their children without the payment of matriculation fees. This right cannot be diminished by an arrangement with a private school to supply the instruction in return for public money, the matriculation fee augmenting the public funds to pay the private school.⁴¹

³²Note: Ann. Cas. 1913 B, 1021.

³³State v. Joint Sch. Dis. No. 1, 65 Wis. 631, 27 N. W. 829; 56 Am. Rep. 653.

³⁴Note: 22 L. R. A. (N. S.) 584 et seq.

³⁵People v. Moore, 240 Ill. 408, 88 N. E. 979.

³⁶Todd v. Bd. of Ed., City of Williston, 209 N. W. 369.

³⁷State ex rel. Groves et al. v. Sch. Dis. of Omaha, 101 Neb. 263, 162 N. W. 640.

³⁸Blinde v. Klinge et al., 30 Mo. App. 285; State ex rel. Halbert v. Clymer, et al., 164 Mo. App. 671, 147 S. W. 1119.

³⁹Brinson v. Jackson, 168 Ga. 353, 148 S. E. 96.

⁴⁰Major v. Cayce, 98 Ky. 357, 33 S. W. 93; 30 L. R. A. 697.

⁴¹Wilson v. Stanford, 133 Ga. 483, 66 S. E. 258.

¹⁸Lake Farm v. District Board of District School No. 2, 179 Mich. 171, 146 N. W. 115; 51 L. R. A. (N. S.) 234 and note; 164 Pa. St. 607; 30 Atl. 509; 26 L. R. A. 584; Notes, 36 L. R. A. (N. S.) 344; 3 Ann. Cas. 694.

¹⁹Grand Lodge, I. O. O. F., West Va., v. Board of Education of Elkins, 90 W. Va. 8, 110 S. E. 440; 48 A. L. R. 1092.

²⁰275 Ill. 274, 114 N. E. 20; 311 Ill. 425, 143 N. E. 56; 77 Pa. Super. Ct. 75; 221 N. W. 515 (Iowa).

²¹State of Ohio v. Eveland, 158 N. E. 169.

²²Harowitz v. Bd. of Ed. Yonkers, 216 N. Y. S. 646, 217 App. Div. 233.

²³Black v. Graham, 238 Pa. 381, 86 Atl. 266; 120 Minn. 443, 139 N. W. 949, 43 L. R. A. (N. S.) 936.

²⁴Same as No. 23.

²⁵Confluence Borough Sch. Dis. v. Ursina Borough Dis. 88 Pa. Super. Ct. 299.

²⁶Kidd v. Jt. Sch. Dis., City of Richland Center, 194 Wis. 353, 216 N. W. 499.

²⁷Morrison v. Smith-Pocahontas Coal Co. 88 W. Va. 158, 106 S. E. 449.

A reasonable incidental fee for heating or lighting or other necessary expenses may be imposed⁴² although it is unlawful for the school authorities to compel the pupils to contribute manual labor for the purpose.⁴³ Yet, in another case, it has been squarely held that such a fee cannot be charged on the theory that it is inconsistent with the public-school system as planned by the constitution.⁴⁴ Where it is held that such a fee cannot be charged, the ruling may not be circumvented by indirection. Thus, an act of the legislature permitting the renting of books cannot be made the cloak for a fee by making the renting compulsory.⁴⁵

The school may collect laboratory fees, library fines and other such fees unless such charges are in conflict with the express or implied provisions of the state law or the Constitution of the United States. Fines for keeping library books overtime or charges for the breakage in laboratories are justified upon the basis of an implied contract entered into by both parties beforehand.

The Amount of Tuition

A résumé of the school codes of the several states reveals differences in the method of determining the amount of tuition as well as in the placement of responsibility for payment upon the individual or upon his home school district.

The usual basis for assessing the tuition is the per-capita cost of instruction, either of the current or of the preceding year. Some codes state that the charge shall not be more than the per-capita cost, while others state that it shall not be less. In a case in Georgia the supreme court held that "nonresidents are at least to pay for their own tuition and the people of the town are not to be burdened as taxpayers with any part of the same. The board can put terms upon the nonresidents which will make their tuition a source of revenue to the school but cannot allow terms which will make it an expense upon the inhabitants of the town."⁴⁶

In this same connection there is an interesting statement in the Report of the State School Code Committee of Kansas (p. 29) made in January, 1929, to the legislature: "Most of the tuition laws were revised in 1923 to make them \$2 per week or fraction thereof. In 1925 the general tuition law was revised to read \$3 per week or fraction thereof. Either these are wrong or the others are wrong. A study of high-school costs, very easily obtainable from the records of the state superintendent, should determine which should prevail. If nothing else can be accomplished, certainly tuition should be made uniform throughout the state. The other chief source of vexation is in regard to the consent for attendance in another district from the district or county where the pupil resides. If tuition laws exist they should be on a basis of the cost to the individual school for educating that child. Since the law must be on a statewide basis, an average estimate of the cost of this tuition made uniform for all kinds of schools throughout the state should prevail."

What Are Proper Costs?

In some states the statutes determine the basis for tuition charge, while in others it is a discretionary power of the local school board. However, the "average per-capita cost" is often misleading as it is usually not clearly defined whether it is to be based upon instructional costs alone, current operating expenses, or the



W. L. SPROUSE, SUPERINTENDENT OF SCHOOLS, LOGANSPORT, INDIANA

Mr. W. Lloyd Sprouse, who has been elected superintendent of schools at Logansport, Ind., to succeed D. W. Horton, was formerly principal of the Logansport high school.

Mr. Sprouse is a graduate of Ohio University and holds a number of degrees given by that institution. At present he is completing graduate work leading to the Ph.D. degree at the same institution. Mr. Sprouse was principal of the high school at Mannington, W. Va., for six years, principal of the high school at Kenton, Ohio, for two years, and had been principal of the high school at Logansport for two years prior to accepting his present appointment.

total expenditure, either with or without capital outlay included. Usually there is no specification as to whether the cost is to be based upon the total enrollment, the average number belonging, or upon the average daily attendance. Yet, some courts have determined the basis explicitly, permitting a district operating under a statute "allowing the district to charge the actual pro rata cost of tuition" to charge such proportionate parts of the entire cost of tuition as the number of outside pupils bears to the whole number of students attending the school.⁴⁷ The courts do not seem to have acted logically in denying the cost of fuel, heat, janitors' wages, incidental expense and interest on bonds to be included in chargeable costs.⁴⁸

Statutes providing for the education in one district of children residing in another generally require the cost of the tuition of such children to be paid by their home district⁴⁹ or that the school tax of the parents be paid to the district in which the children attend school. Yet in Tennessee it was held that it is not necessary to provide compensation because the district is subject to the absolute will of the legislature, and its obligations may be changed at the mandate of the legislature, especially where the state contributes to the school fund of the district. If, however, such a statute imposes an undue burden of taxation on either district, it is void.⁵¹ In some instances, as in New Hampshire, the state will contribute to the tuition of children who live in unorganized parts of the state, or, as in Minnesota, as much as \$7 a

month may be paid by the state for tuition of pupils who have no high schools in their district.

The problem of tuition is somewhat lessened in those states which have the county system of schools, although there is usually some provision for pupils attending schools in counties other than their home county.

Practice varies in regard to high-school tuition. In an Illinois case it was held that where there were only eight grades in a non-high-school district the district is not liable for tuition in an adjoining high-school district.⁵² Yet, many school codes require a district to provide either schools or tuition in adequate schools for its pupils.

Usually, where the tuition is to be paid by a school board, the directors must approve the claim in advance, unless the statute makes the payment mandatory. In some states a special tax for tuition purposes is provided.

It is recognized that the per-capita cost of instruction varies in the several divisions of the school and a difference in the rate of tuition for the different schools may result thereby.

Miscellaneous Aspects

Payment of tuition by the individual is usually required in advance, monthly or quarterly. Settlement by the school district is usually made on a yearly basis, quite often through the medium of the county treasurer.

In general, refunds are permissible if the payment has been made in advance.

A change in the status of residence from non-resident to resident is immediately recognized. Where state aid has been received on the basis of enumeration, the change from resident to nonresident is usually not effective until the close of the fiscal year.

In some cities where the problem of the non-resident pupils has become acute special techniques have been worked out. In an interesting article in the April, 1927, issue of the *SCHOOL BOARD JOURNAL*, N. R. Hegel gives a discussion of the tuition situation in Minneapolis, including the 23 different classifications of tuition cases among 3,340 nonresident pupils. In closing, Mr. Hegel remarks: "States need statutes more clearly defining the residence of children for school attendance; and there should be a uniform procedure among the states involving the transfer of funds to enable children to attend school where it is most convenient for them to attend."

In Louisiana, the basis for the tuition payable by a child's home parish (county) is the per-capita cost in the home parish. Thus the parish pays only what it would have cost to educate the child at home.

South Dakota authorizes the payment of tuition by a district for a pupil who attends school out of the state.

The children of public officers or of appointees or employees of the state are generally permitted to attend school without tuition, although the parents do not establish a legal residence in the district.

Residence for school purpose is not destroyed because the parents have separated and destroyed the common home, where one of the parents is caring for the child.⁵³

Unless the subdivision of the state is responsible for the tuition, it is enforceable against the parent and the remedy is not limited to the expulsion of the child.⁵⁴

⁴⁷State ex rel. Noel v. Hamilton, 69 Miss. 116, 10 So. 57.

⁴⁸Same as 47; also, Norriston Borough Sch. Dis. v. Upper Merion Tp. Sch. Dis., 49 Pa. Sup. Ct. 561.

⁴⁹Kent v. Town of Kentland, 62 Ind. 291; 30 Am. Rep. 182; Havelock H. S. Dis. No. 137 v. Lancaster Co., 60 Neb. 147; 82 N. W. 380; 83 A. S. R. 525; 49 L. R. A. 343. Note: Ann. Cas. 1913 B, 1019.

⁵⁰Edmondson v. Bd. of Ed. 108 Tenn. 557, 69 S. W. 274; 58 L. R. A. 170.

⁵¹Havelock H. S. Dis. No. 137 v. Lancaster Co., 60 Neb. 147, 82 N. W. 380.

⁴²Hughes v. Outlaw, 197 Ala. 452, 73 So. 16; Ann. Cas. 1918 C, 872; Bryant v. Whisenant, 167 Ala. 325, 52 So. 525; 140 A. S. R. 41.

⁴³Hollet et al. v. Rock Hill School Dis., 60 S. C. 41, 38 S. E. 220.

⁴⁴24 R. C. L. 630. Note: Ann. Cas. 1914 B, 406.

⁴⁵Note: Ann. Cas. 1914 B, 406.

⁴⁶Irvin et al. v. Gregory et al., 86 Ga. 605, 13 S. E. 120.

⁵²Weatherford et al. v. School Directors of Dis. No. 7, 317 Ill. 495, 148 N. E. 244.

⁵³317 Ill. 495, 148 N. E. 244.

⁵⁴Fractional Sch. Dis. v. Yerrington, 108 Mich. 414, 66 N. W. 324; Town of Wrentham v. Fales, 185 Mass. 539, 70 N. E. 936; Westfield Borough Sch. Dis. v. Dillman, 22 Pa. Co. Ct. 567; Irvin et al. v. Gregory et al., 86 Ga. 605, 13 S. E. 120; Maxcy v. City of Oshkosh et al., 144 Wis. 238, 128 N. W. 899, 31 L. R. A. (N. S.) 787.

Los Angeles School Janitors Win Silver Cups

Valerie Watrous

When more than a thousand janitor-engineers sat down at the flower-bedecked tables in the banquet room of the Chamber of Commerce of Los Angeles on June 13, last, it was to celebrate the closing of a contest different from any previously held in the schools. The guests had assembled not only for the annual dinner, but to witness the award of three silver trophies, known as the William E. Record cups.

The contest and the awards were planned by William E. Record, business manager for the Los Angeles board of education, and were in recognition of the schools that had maintained during the year the highest degree of cleanliness and whose janitors had shown the greatest amount of courtesy to all with whom they came in contact.

It was a competition participated in by the custodians of the 384 schools in the Los Angeles City District. It had its inception with the opening of the 1930-31 school year, and in addition to the three cups presented as first prizes there were a number of wood plaques as awards of merit. These distinctions went to the schools that had won the commendation of the committee, but which had not quite reached the high standard set more than nine months before as the goal at which the business department was aiming.

Weekly inspections of schools resulted in an "elimination list" which carried the names of 29 schools to be judged by the committee. To avoid any partiality, the members of the committee were drawn from three divisions of school executives. Mrs. James K. Lytle, member of the board of education, and president of the Tenth District of the Parent-Teacher Association, headed the committee. She was assisted by Dr. C. M. Sellery, department of health and corrective physical education, and E. W. Davis of the architectural division of the Business Department, who has charge of the janitorial problems of the schools.

In conferring the prizes Mrs. Lytle outlined some of the difficulties presented to the committee. "So excellent was the condition of the 29 schools inspected by us, and so superior the bearing and personality of the janitors, we just had to dig down for some little fraction of difference to make the awards. Indeed, we returned bewildered from our tour and even suggested to Mr. Record, that he had better order 29 cups."

Competition was more keen among the elementary schools than it was in the junior or senior high schools, since there were 294 elementary and but 23 junior and 29 senior high schools.



The William E. Record trophies presented to school custodians whose courtesy and the cleanliness of the buildings in their charge won the highest awards at the close of a janitorial-engineer contest which began last September. The winners were Harry Messersmith, custodian of George Washington High school; Mrs. Anna Baumann, 72 years of age, custodian of Amelia Street Elementary School; and Clifford G. Brown, custodian of the Audubon Junior High School.



Mrs. Anna Baumann, 72 years of age, custodian of Amelia Street School, Los Angeles, who won the silver cup in the elementary class in a recent "cleanliness and courtesy contest" sponsored by William E. Record, business manager, who also was the donor of the cups. Mrs. Baumann has seen 27 years of service in the Los Angeles city schools.

The first silver cup went to the Amelia Street School. The main structure at this school is of frame, built more than fifty years ago; the most recent wing was built of brick in 1916.

Mrs. Anna Baumann is the chief custodian at Amelia Street, and has a woman and a man to assist her. She has seen 27 years of service in the Los Angeles schools, and is 72 years of age.

The Audubon Junior High School, opened three years ago, and maintained by Clifford G. Brown as chief custodian, and his assistants, was the honored school in that division.

The George Washington High School, built within the past five years, in charge of Harry L. Messersmith, custodian, received the silver cup in the senior-high-school group.

So sharp was the competition and so eager were the custodians that the six plaques in the

elementary division, the three in the junior-high-school division, and the two awarded to senior high schools, were almost as keenly coveted as the silver cups, since less than half of the schools in the final competition were to receive awards.

As guest of honor in addition to Mr. Record, business manager, were members of the board of education, Dr. Frank A. Bouelle, superintendent of schools, executive heads of departments, and leaders in civic affairs who take an active interest in the schools.

Since some 300 janitors, engineers, and their wives could not be accommodated in the banquet room, they crowded the lobby and corridors, and following the dinner were seated in the aisles until every foot in the great room had been filled.

Minneapolis Graduates Janitors

Annually in June, an important institution holds its graduation exercises as a part of the Minneapolis school system. There are music, a few flowers, a small gathering of school-board members and school officials, and a very serious audience of "old grads" and friends. Both the present and the former graduates of the school are garbed in neat uniforms of which they are exceedingly proud. Strange as it may seem, the prize winners at the exercises and the honor men are not included in the list of the graduating class, but generally are old-timers. The school referred to is the Minneapolis Janitor-Engineer School, an institution regularly organized as a full- and part-time vocational school, recognized and receiving state aid and federal aid under the Smith-Hughes Law.

The commencement exercises for 1931 took place on Thursday afternoon, July 18, at four o'clock, and were preceded by the annual inspection of the janitor-engineer personnel of the Minneapolis schools, conducted by Mr. George F. Womrath, business superintendent of schools, who is responsible for the initiation and growth

of the entire program of personnel improvement in the Minneapolis schools. Mr. L. E. Jepson, president of the board of education, and Mr. L. C. Helm, principal of the Janitor-Engineer School, assisted in the inspection. Mr. Helm acted as chairman of the exercises and Mr. Jepson conferred the certificates and other awards.

A large silver cup, presented by the *Minneapolis Tribune*, to be kept for one year by the school which has the best record for cleanliness and general efficiency of its janitorial staff, was awarded to A. J. Ziegler, janitor-engineer of the Nokomis Junior High School. Forty-eight men were graduated from the formal day-school course. Twenty-two janitors received very-much-coveted certificates testifying to meritorious work, and were placed on the honor roll for 1931, because of exceptionally good work in the maintenance of their respective buildings. Twenty-seven janitors received advances in grades of their state engineering licenses, based on classwork and examinations which they took during the year in the Janitor-Engineer School.

Following the graduation exercises, which in-

cluded several dramatic readings, vocal selections, by members of the janitor-engineer staff, and band music by the Minneapolis Janitor-Engineers' band, the annual dinner and meeting of the staff was held.

The Minneapolis schools have for more than fifteen years conducted a definite program of improvement of the janitor-engineering staff. The graduation exercises now held annually are merely an outward sign of the splendid work which is being carried on both for the preliminary training of janitors and for the still more important training-in-service which is believed to be especially important. Visitors to the Minneapolis schools have frequently remarked that the *esprit de corps* of the janitor-engineer force is the highest to be found in any American city. This is not only the result of the continuous training program, but is even more due to the general policy of the executive officers of the business division of the schools, who consider the janitors an important element in the conduct of the schools. Mr. George F. Womrath has insisted for years that the janitors render a socially important service, and that they should be chosen because they are alert to what the proper physical requirements of a school building are, and know how to accomplish the required results. The board of education of Minneapolis appreciates the janitor as a human being and provides him with such conditions of work that he will be proficient in his labors and will have ample incentives to perform the work required of him in an acceptable way. He is respected as a man so that he is self-respecting and can do satisfactory work, and continually improve in it. He is given an opportunity of understanding his social relationships and his important duties for improving the moral as well as the educational conditions of the schools. He has had a fair working load and a

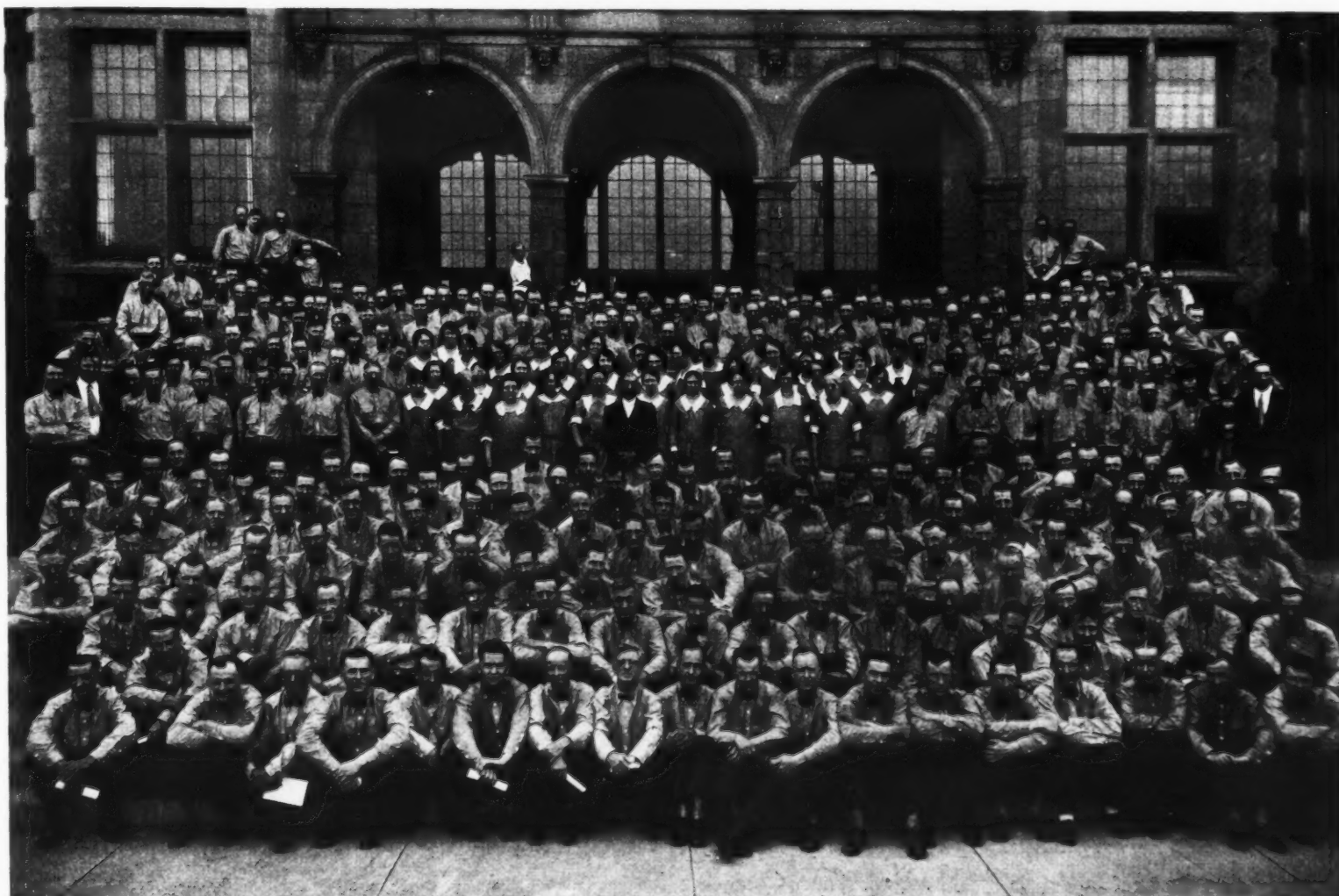


JANITOR-ENGINEER A. J. ZIEGLER RECEIVING THE SILVER CUP FOR THE BEST RECORD FOR CLEANLINESS FROM MR. L. C. HELM

reasonable working day, and his compensation is adequate to maintain himself and his family in reasonable comfort.

That the Minneapolis program has been ex-

ceedingly successful is the common testimony of all who have had the privilege of visiting the schools and of seeing the splendid work accomplished in the Janitor-Engineer School.



MORE THAN A GROUP OF JANITORS

The janitorial-engineering staff of the Minneapolis Public Schools is far more than a lot of janitors. It is a highly trained group of self-reliant, loyal, and efficient men and women who are fully cognizant of their true function and of the important service they render to the schools and the community. Growth in character and service is the outstanding quality of the group.

The Practicability of State Insurance Funds

Walter F. Beyer, Member of School Board, Westfield, New Jersey

In his article entitled "Does State Insurance on School Property Pay?"¹ Mr. P. K. Platts, of Florence, Alabama, states that by appropriating \$25,000 a year (the estimated cost of commercial insurance) the school board of Cleveland has built up an insurance reserve fund of \$400,000 after a number of years. He also mentions the fact that there is now a discussion as to whether or not to put this fund into the construction of new buildings. If the money is used for such an end, the whole idea behind the creation of the fund will go into the discard and when more losses occur, as they most assuredly will, the taxpayers will be obliged to pay them. This procedure would constitute just one more case of allowing unwise officials to meddle with a public fund and divert it into channels for which it was never intended.

Mr. Platts makes a strong plea for a state insurance fund in Alabama to take care of fire losses in city schools as well as in state, county, and rural schools, and other public buildings. He cites figures to illustrate how money has been "saved" in other states and in Alabama through state insurance funds. But there is a darker side to the picture. Many states, which have tried the state-fund experiment, have given it up as impractical due to heavy losses on public property, mismanagement of the fund, or inadequate facilities and personnel.

Severe Losses on Public Property

It has been estimated that in the period from 1924 to 1930, inclusive, there was a total of 8,350 fires in public buildings (excluding schools) with a property loss of \$12,195,630. Of these fires, there were 167 involving a property damage of \$10,000 or more, making a total loss of \$7,317,378 for these larger fires.

Fires in state capitols have been frequent during the past few years; namely, in New York, Iowa, Wisconsin, Mississippi, Missouri, the Houses of Parliament in Ottawa, Canada (1916), and on December 28, 1930, at Bismarck, North Dakota (loss \$1,000,000).

The Alabama Fire Record

The State of Alabama has not escaped. During the period from 1924 to 1930, inclusive, the fire losses on privately insured public property in the State of Alabama (excluding schools) have totaled \$630,303. The losses on privately insured public schools during the same period have been \$700,321, making a total of \$1,330,624 for losses on insured public buildings for these seven years. Figured at the average premium rate of 77 cents per \$100 of insurance protection, the cost of the insurance on these buildings for the seven years was approximately \$90,000. According to these figures, the State of Alabama saved a large sum of money by having these buildings privately insured.

Since January 1, 1931, the fire marshal of Alabama has investigated 35 school fires. The large majority of these school buildings were small and located in rural communities.

There have been entirely too many school fires in rural sections of the state. The state sinking fund against fire which carries the smaller schools up to \$5,000, has been largely depleted.

A schedule of policies on Alabama state institutions and schools was put into force October 1, 1930. The total losses to date under this schedule have been \$28,623.30. This does not include the losses on small country schools either uninsured or subject to the state fund. The total premiums under this schedule are \$48,336.20, and, if this high burning rate keeps up, the com-

panies will lose money on this business. Included in the schedule are a number of buildings of high value. If one of these expensive buildings should be destroyed by fire, the loss would be paid by the insurance companies involved. The amount of loss would be of such large proportions that in case a state fund of ordinary size were provided, it would be entirely wiped out.

Sound Underwriting Practice

If the experience of 200 years has proved that it is a sound principle of insurance to separate risks and write only a moderate amount of insurance subject to one fire, it can be easily understood why any one city or even a state that decides to carry its own insurance on public buildings is likely to find itself in grave trouble. Large insurance companies, efficiently managed and devoting themselves to the study and protection of risks over a wide area, have great difficulty in making an underwriting profit over a long period of years.

The diversification of business and the division of large risks among a number of companies are recognized principles of safe insurance underwriting.

It may be interesting to those who do not understand how modern fire insurance is conducted to know the process by which a large building in one of our modern cities is protected.

An insurance agent binds his company on a certain building. When the company has been notified, a moderate amount of insurance may be retained for itself and for associated companies. It may be that part is placed with the companies representing a treaty group in which twenty or more companies may be interested. Sometimes, a third part is placed with another group of companies, especially if the valuation of the building is high. The one risk may be divided among fifty large stock fire-insurance companies, placing enormous resources back of the company which actually issues the single policy covering the risk. Under this plan of distribution, division, and reinsurance, million-dollar policies may be safely issued.

Insurance companies base the amount they will risk on any one building on several important points. The ownership and management must be approved before the other factors of location, fire protection, distance from a fire department, and physical character of the risk are considered. A company might insure a building to the extent of \$100,000 provided all its requirements were satisfactory, and refuse to accept a carelessly kept and poorly protected building upon which only \$1,000 insurance is wanted.

The Inadequacy of the Fund

One difficulty which faces the promoters of state or municipal insurance funds is the fact that many of the building units represent large individual values, and, if a fund cannot be created large enough to take care of a total loss on the most valuable of these units, then the fund only faces failure. There is also the ever-present possibility of a sweeping conflagration which destroys several valuable public buildings at one time.

When a state insures its own property in a fund, the fund is generally not even comparable in size to the assets of the smallest of stock fire-insurance companies. In addition, no small stock fire-insurance company would knowingly conduct its business so that it might be wiped out by a single fire or conflagration.

With a municipal or state fund, a fundamental principle of fire-insurance underwriting must be disregarded, for there is no opportunity to select risks. Every building owned by the

state must be included, regardless of construction, location, exposure, or protection.

It must also be remembered that, if public schools and other buildings are not privately insured, the state fails to benefit by the thorough inspections given by stock fire-insurance companies to company-insured buildings. Frequently, upon the advice of a stock fire-insurance-company representative, an owner installs some kind of fire protection equipment, such as sand, water pails, or fire extinguishers. The insurance-company representative also gives advice on building construction from the angle of fire safety.

Interest Charges Exceed Insurance Cost

Usually, when city or state governments do not insure their property and suffer disastrous losses, they turn to the useful expedient of a bond issue to replace the damaged property. In this case, the interest paid on the bonds is not only more than the original cost of the insurance, but frequently more than the entire insurance payment on all city- or state-owned property.

The High Cost of State Finance

There are only three ways by which a municipality or a state can replace property losses:

1. By insurance payments.
2. By bonded indebtedness (borrowing the needed sum and paying the principal plus interest).
3. By taxation.

When the Buffalo armory burned on May 6, 1931, with a loss of \$7,000,000 to the State of New York, it was estimated that it would take more than 129 years to accumulate insurance premiums to equal the amount of the loss. The interest on the bonded indebtedness of \$7,000,000 at 4 per cent is \$280,000, or more than five times the insurance premium on the same amount at the average fire-insurance rate. (The insurance figured at 77 cents a hundred would be \$53,900 annually.)

If the \$7,000,000 is to be raised by taxation, there will be collection expense to be charged, and a certain decrease in the value of property that always occurs when taxes increase, but the main consideration is the removal of \$7,000,000 from property owners. This money is worth at least savings-bank interest, 4 per cent per annum, or \$280,000, to them.

Other dangers beset the state insurance fund. When the fund reaches sizeable proportions, politics almost invariably creeps in and interferes with the efficient management of the fund. Sometimes the money is "borrowed" or misappropriated as was the case in the State of Wisconsin a few years ago. Sometimes the fund shrinks away because of unwise investments.

Government in Business

Even if the state government in its enthusiasm to make a temporary show of saving money can overlook the chances of disaster, can explain away the risk it is taking with public funds, and can shrug its shoulders at the difficulties in the operation of the fund, it still faces one serious objection. It is basically wrong for any American governing body, be it city, state, or nation, to enter a line of private business that is honestly and fairly conducted.

The stock fire-insurance business, through its companies and agents, pays more than its share of taxes.

There is no more reason for a state government to enter the insurance business than any other properly conducted enterprise.

It is unwise for any form of government to enter the insurance business, because insurance

¹AMERICAN SCHOOL BOARD JOURNAL, July, 1931, p. 59.

Getting Full Value in School Business Management

G. E. Van Dyke

The schoolman who goes from a teaching position to an executive office in the schools is impressed, early in his career, with the great importance of securing practical economies in the business administration of public schools. One or two years' experience in reviewing financial reports and in making up school budgets confirms the school executive in the opinion that the members of the school board are not wrong in scrutinizing all proposals for expenditures from the economic standpoint and in insisting upon businesslike procedures. Experience, too, quickly teaches the necessity of modifying generally accepted principles of school administration on the basis of local conditions and local precedents.

There seems to be a general need for a more common exchange of experiences on the part of superintendents and secretaries in the business management of schools. Many local policies which have been developed successfully by business managers are little known beyond their own communities. In the present paper a number of business problems in school administration are discussed in the light of local experience as well as general principles of administration.

Furniture and Equipment

School furniture and permanent equipment involves heavy capital investments and is one of the first places in which economies can be effected. It has been well said that, first, the amount of equipment needed should be determined by actual records and other factual evidence to which is added a careful estimate of further growth and curriculum expansion. Second, equipment and furniture should be selected to meet the requirements of educational service to which it is to be put. Inappropriate and inconvenient equipment will have a direct and harmful influence on the work done in schoolrooms and offices just as convenient and appropriate furniture and equipment will help learning, teaching, and administrative activities.¹

To determine the amount of equipment needed for a school or a department of a school it is necessary, first, to determine the growth and development of school needs and service over a period of years. This study is best made in connection with the school-building program of a school system which makes it possible to show in well-organized form the probable increases from year to year in the number and kinds of pupils to be accommodated. If the estimates are made on the basis of probable enrollments in grades, subjects, and departments, the business manager is enabled to submit accurate estimates of the number of desks, chairs, tables, benches, built-in cabinets, and other items which probably will be used in the new buildings.

The second element in an adequate policy of providing equipment involves a definite setting aside of a specific sum of money for the purchase of equipment before buildings are erected. This means that the cost of equipment is quite as definitely estimated as is the cost of the building itself. It is the practice of some school officials to obtain the money for a building with a very hazy idea that in some mysterious way enough money will be found for the purchase of equipment after the building is erected. The result nearly always is that so little money is left after the building is completed that inevitably cheap and consequently inappropriate and inadequate furniture and equipment are bought. As a result the actual work of the school is hampered and more money must be spent in the end to secure serviceable equipment for replacements. In

larger communities local experience has indicated the desirability of setting aside from 15 to 25 per cent of the money to be spent for a building, for the purchase of equipment. The actual experience of a city, from year to year, is the only safe guide in such allotments.

To aid the business manager in purchasing equipment that meets the needs of the local school situation, it is necessary to draw up definite and detailed specifications for each type of article and each piece of equipment or machinery. Department heads, principals, supervisors, and the superintendent of schools definitely must set up the educational function of the equipment so that the specifications meet instructional needs. In most cases stock furniture, machines, and equipment are available in the open market to satisfy the requirements of the schools. When the specifications are such that equipment, etc., must be made to order, it is certain that the cost per unit will be greatly increased. Keen observers have found that standard equipment built to meet school needs is economical because it is well built and gives longer service. In general, well-designed, well-made, and well-finished school furniture and equipment are more economical in the long run because they are better able to withstand the kind of wear and tear which children inflict.

The problem of standardizing school equipment as opposed to unregulated selection of furniture, etc., is always difficult. No doubt, money can be saved to some degree in purchasing a large number of chairs, tables, and other items of the same style, make, and size. Standardized buying, however, is harmful if the so-called standards are not frequently scrutinized from the educational standpoint and are changed according to improvements in instructional practice, new inventions and refinements made by manufacturers, etc.

The experience of the city of Cleveland² is interesting as indicating the possibility of standardized equipment and supplies. In Cleveland, as in numerous other cities, it has been possible to save great amounts of money in the purchase of various articles by such simple procedure as reducing the style of pens to be bought from 24 to 2, styles of pen holders from 8 to 2, the types of paper from a dozen to 3 or 4 sheets. A specific example of standardization is reported by F. C. Engelhardt³ who witnessed the redesigning of the furniture in a small school building. In the process tables, workbenches, etc., were simplified by eliminating unnecessary drawers, etc. A tabulation of the savings made is found in the following table:

TABLE I. Economies Effected in the Redesigning of School Furniture

Articles of Furniture	No. of Articles	Estimated Saving	Total Saving
Teachers' desks	70	\$ 25	\$1,750
Typewriting desks	35	25	875
Bookkeeping desks	36	25	900
Free-hand drawing tables	64	30	1,920
Mechanical-drawing tables	64	22	1,420
Soldering benches	1	358	358
Machine benches	2	118	236
Stake benches	2	98	196

In this instance, modifications in the furniture were possible because ample storage space of the most flexible kind had been built into the rooms. The plan may not be acceptable for universal use, but it indicates that the circumspect business official will study the problem for both educational effectiveness and economy.

The better manufacturers of school furniture and equipment are keenly alive to the necessity

of providing the schools with equipment and furniture that meets instructional needs and that is at the same time moderate in first cost and long-living in service. Several firms have research departments that are constantly studying school needs. Practically every large manufacturer has on his staff one or more educators who are on the lookout for changes in the educational practice and who are authorized from time to time to make special research studies. Some years ago a firm which manufactures school desks carried on through its workers a study of the physical measurements of more than 30,000 pupils to determine the proper heights and angles at which desks should be placed to insure best posture for pupils.⁴ The average manufacturer in the school trade is convinced that he can succeed in the school market only in proportion as he meets educational needs and renders an economic service.

Type of Furniture

The purchase of chairs and tables for recitation rooms, in place of conventional desks and seats, is worth considering as an effective economy where the instructional methods make an informal classroom atmosphere desirable. Teachers of certain subjects, especially in the primary grades and in the high schools, find that an informal situation is essential for success. Similarly, teachers have found that the older types of bookcases and certain types of formal library furniture may very well be replaced by more simple cases supplemented with simple library tables.

Other individual pieces of equipment could be named and described here with suggestions for economies in the original purchase price, in convenience, and appropriateness of use, and in maintenance and repair. For example, Denver has found that a wall drinking fountain of a certain type is more economical in first cost, satisfactory in operation and upkeep, than other more expensive and complicated pedestal drinking fountains. Similarly, other school authorities have found that certain types of faucets save water because they are of the automatic closing type; certain types of containers for toilet paper and paper towels prevent thoughtless wastage; certain types of dispensers of liquid soap allow only the use of a small amount necessary to wash the hands.

Where to Buy

Every school business manager continually faces the problem of sources from which to obtain equipment and supplies. Shall he purchase from local dealers and satisfy the clamor for spending the schools' money with those who pay more directly for schools? Shall purchases be made in the large cities from manufacturers and wholesale dealers? Shall purchases be made on bids received on definite specifications? Shall buying be done in the open market? What attention is to be paid to traveling salesmen who present their wares by well-known high-pressure sales methods?

There can be no categorical answer to these questions. Every business manager will find from experience that he must adjust his methods as circumstances dictate. Naturally, he will buy from local taxpayers when all other conditions are equal. He must, however, hold himself free to buy the things which are most advantageous for the schools and from the best sources whether these are local or outside manufacturers, jobbers, or dealers. He will be open minded in all these matters and will favor no

¹Engelhardt, N. L., and F., *Public School Business Administration*, Teachers College, Columbia University, pp. 334 ff.

²G. E. Irons, "Shall We Standardize School Equipment and Supplies," *SCHOOL BOARD JOURNAL*, 75:45-46, July, 1927.

³F. C. Engelhardt, "Principles Governing Management and Accounting for School Plants," *SCHOOL BOARD JOURNAL*, 75:42 ff., July, 1927.

⁴N. C. Hunter, "School Equipment from the Manufacturer's Standpoint," *SCHOOL BOARD JOURNAL*, July, 1927, p. 44.

one except on the basis of quality, utility to the schools, and price.

The possibility of rural school districts uniting for the purchase of equipment and materials is being tried out in California and in limited sections of the middle west. The proponents of the idea are enthusiastic concerning the economies to be effected.⁵ The experience of one California county is reflected in the following table:

TABLE II. Prices of School Supplies Before and After Adopting the County-Unit Buying Plan, Calaveras County, California

Commodity	Amount Used	Regular Price to Individual Districts	Price to County
Blotters	34 reams	\$1.00	\$.50
Crayola	15 doz. boxes	1.20	.75
Chalk	91 boxes	1.00	.60
Penholders	8 dozen	.60	.38
Theme Paper	82 reams	3.00	2.00
Library Paste	22 pints	.90	.65
Water Color Paints	84 boxes	.50	.35

Certain materials and supplies for school use can profitably be tested to determine their strength and purity. In Oakland and, in fact, in many of the large cities, the purchasing department regularly tests supplies and materials on the basis of predetermined standards. The purchasing office of the University of Illinois makes use of the physical and chemistry laboratories to test the products bought for that great university. The strength of towels, paper, etc., are determined before they are purchased. Fuel is commonly tested in city school systems, for its B.t.u. content. The plan, of course, is possible only in school systems which have access to testing facilities. The business manager in a small school system will find it possible to test comparatively few products which he receives. If the high-school chemistry teacher is a competent man, he can test soap and other cleaning materials; the manual-training supervisor can pass on the quality of the wood, construction and finish of furniture, etc. The business manager can readily develop plans for determining that most of the products which he buys are as represented.

Many manufacturers are ready to present analyses of their products, and to guarantee that the quality represented will be maintained at all times. The National School Supply Association has only recently adopted a plan for labeling janitorial supplies for schools under a plan that guarantees the quality of soaps, disinfectants, and other cleaning materials. The products of many large firms are recognized as standard in their particular fields, and it is possible to refer to many established trade names which are in themselves guarantees of quality.

While the business manager may rely on many existing helps to establish the quality of the goods which he buys, he should establish from his own personal knowledge and experience the truth of claims which are presented to him. Quality and price of school products are not the only important elements in their purchase. Prompt delivery is also a factor. Well-known authorities declare that the five months when the most purchasing is done are June, July, May, April, and January in the order named.⁶ While it is possible that some saving of money can be made by purchasing at times other than the busy months, the business manager may well remember that it is the common experience the orders which are placed as early as March receive more careful attention and are accepted at a better price than orders which are placed in June or July when the school purchasing season is in full swing.

⁵H. L. Buckalew, *SCHOOL BOARD JOURNAL*, pp. 75 ff., August, 1927.

⁶Engelhardt and Engelhardt, *op. cit.*, p. 668.

The Maintenance of Buildings

Economy in the maintenance of school buildings begins properly with efficient custodial service. The best janitor service in schools is not intended immediately to reduce the cost of cleaning, heating, and other maintenance charges of schools, but rather to keep the buildings in good condition and thereby to increase their efficiency for school use and in the long run their service life. In the industrial world, much progress has been made in the improvement of the care and operation of industrial and office buildings. It is thoroughly recognized that a clean shop is usually an efficient shop, and that employees will be most contented and interested in their work if they have clean and attractive surroundings. A clean, neat school building is likely to be an efficient one, and the children in it are more than likely to be happy.

In recent years janitorial service in schools has been improved by the careful analysis of cleaning operations for the purpose of cutting down motion, of eliminating waste, of improving the quality of materials and tools used by the janitor, and of generally raising janitorial standards by expedients which will be discussed later. The studies of Dr. C. E. Reeves, who timed the work of janitors and analyzed their methods of work, and who finally evaluated the efficiency of their service, is typical of work which various city school systems have carried on in a less formal manner in recent years. Where these studies have considered the janitor as a person, not a mere appliance, and where account has been taken of improvements which are constantly being made in materials and tools, good results have been obtained.

Another interesting approach to the problem has been found in the periodic rating of janitors by means of score cards similar to those which are used in rating teachers. The results of use of these devices have been indirect and exceedingly difficult to determine. For the janitor to know that he is deficient in sweeping or dusting will not necessarily result in improving his technique or his interest. As in the case of teacher-rating schemes, janitor-rating proposals still require practical incentives for developing better attitudes and encouraging greater application.

Another approach to the problem of improving janitorial service is the plan of conducting courses for the instruction and training of janitors and engineers. Numerous school systems now hold semiannual or monthly meetings of janitors at which problems of cleaning, ventilation, etc., are discussed. The formal plans for teaching janitors range from the highly organized and vocationally efficient training schools, like those at Minnesota, Los Angeles, and St. Louis, to the more loosely set-up plans of the janitorial associations which have as a major function self-improvement through lectures, demonstrations, and home study. The small cities are beginning to take advantage of formal education of the janitor and, while some of the pioneer efforts in this direction in Iowa and Wisconsin have not survived, the work is being taken on in a new and more effective way by some of the state teacher-training schools like those at Pittsburg, Kans., Aberdeen, S. Dak., and elsewhere. At least one wise manufacturer of cleaning supplies has been willing to loan an expert in cleaning to conduct three-day short courses in smaller communities, with notable results.

The present emphasis on the education of the janitor, important as it is, can never take the place of greater care in the selection of new appointees, in well defined standards of efficiency, in closer and more intelligent supervision, in the elimination of politics, and in the maintenance of adequate pay schedules and permanent tenure. As is the janitor so is the school building.

School-Building Repairs

School boards are slowly but quite surely realizing that a building which is kept clean and in order will have a much lengthened life, provided necessary repairs are made with regularity and according to a well-defined plan.

For many years Philadelphia has found that its school plant can be kept in a better state of repair if an annual inspection is held. A well-trained staff of assistants in the architects' department regularly examines each building and makes copious notes of conditions. The inspectors include general building superintendents and experts in plumbing, heating and ventilation, painting, carpentry, sheet-metal work, and masonry. The carefully outlined field-report schedules which each man must follow obviate the danger of overlooking details. These field reports, which are examined in the central office, carefully distinguish between repairs and replacements which are essential or those which are only desirable. Ultimately economy is set up as the guiding principle for determining what repairs to make and what improvements to omit. Several small school systems in the middle west follow a similar plan, and have programs of summer repairwork based on an inspection made annually in March.

The following outline of inspection by Mr. N. L. Sammis is suggestive of the type of inspection which can be used conveniently in schools:

1. Buildings; interior and exterior.
2. Fences, gates, walks, yards.
3. Heating plant and equipment.
4. Plumbing fixtures and equipment.
5. Lighting fixtures and equipment.
6. Fire-protection apparatus.

The work of repairs falls into the following divisions:

1. Cleaning.
2. Carpenter work.
3. Glazing.
4. Painting.
5. Masonry work.
6. Sheet metal and roofing.
7. Electrical work.
8. Plumbing.
9. Miscellaneous.

An outline like the foregoing may be used to good effect annually or semiannually if the business manager, or a competent representative who has experience in building and building repairs, examines each school building with at least the following detail points in mind:

Exterior of Buildings

1. Side walls; examined for masonry defects, carpenter work needed, painting, and possibly cleaning needs. Cracks in brickwork, concrete foundations, and around doorways and windows. Rotted and loose woodwork at doors and windows. Window sash in need of repair. Broken window panes, damaged doors, and door hinges, or hangers. Painted surfaces examined for defects in putty, and condition where vines or shrubs grow on or near walls.

2. Roofs. Rubbish in gutters, valleys, and conductors. Strainers in roof drains. Pitch and gravel roofs examined for exposed places. Metal and gravel edges, flashings, gutters, and conducting pipes examined for corrosion. Missing slate and asbestos shingles replaced. Coating in low spots on roof, especially on all metal roofs. Skylights examined for broken and cracked glass, coating, and condition of frames and flashings. Ventilators examined for coating, and any moving parts examined for good action. Fire escapes examined for coating, fastenings, supports, and operation of movable parts.

Interior of Buildings

1. Floors. Holes, cracks, humps, and sags noted.

2. Walls, doors, windows, and stairways examined for condition of supports, railings,

(Continued on Page 119)

The Clutch of Circumstance

Lynn E. Castle, Stuart, Iowa

Neatem never planned to be a school teacher. It all happened in the moonlight at the old trysting log on the south campus. The tree toad who lived in the branches above could have given you the details. The gist of his decision that night was somewhat like this: Why wait longer to be married when here is work which pays one hundred and fifty dollars a month, just for your B.A., so to speak? Other jobs seemed to demand technical training, or experience, neither of which had appeared in the college catalog.

So Neatem became principal of the high school in Sleepy Hollow, and found it good. He quickly learned to speak to everyone on the street whether he remembered him or not, and was accepted as a regular fellow in the community. He caught and collared the boldest of the sophomores engaged in a rowdy demonstration in the study hall, and thenceforth was "able to keep discipline." One jump ahead of his classes, he found time to coach the basketball team, direct the junior play, and help organize the science club, besides showing the juniors how to paint scenery, talking to the parent-teacher association and the Farmers' Union. By attending each of the four churches he was able to join the right one at last, and when he agreed to teach the young folks' Sunday school class his social stock advanced to par.

Mrs. Neatem did her part also. She returned her calls with prompt dispatch, hung her curtains with the correct twist, "made up to" the right people and snubbed the right ones. She cultivated the talkative Mrs. Wheelis and like the wise old owl "the more she heard the less she spoke" with the result that she committed no indiscretions, chose her enemies judiciously, and withal was a great asset to her husband's community standing and influence.

Promotion Comes

During their first summer they both set out as agents for a popular reference book. Being full of enthusiasm and willing to work, they finished paying for their car, bought more furniture, and took up their residence in one of the better houses in the right neighborhood. Many a pleasant evening was enjoyed by the younger social set in their home that winter.

So it came about in the spring of their second year in Sleepy Hollow that comparisons began to be made between Principal Neatem and Superintendent Stoddard, with the net result that Neatem began his third year in the town as superintendent of schools, with the duties of nominating teachers, supervising instruction, purchasing supplies and equipment, organizing schedules, setting up courses of study, teaching in the high school, and carrying out a multitude of tasks of greater and less importance which made up the administration and management of Sleepy Hollow's largest, most important, and most costly enterprise.

It did not take Neatem long to discover the importance of a sagacious policy of school publicity. He decided that he must continuously "sell" his school to the community. "The school that wins" became his slogan. Basketball games, concerts, plays, commencement day, Armistice Day—all these occasions gave him opportunity to bring the doings of the school to its patrons. He made suggestions to the officers of the parent-teacher association, bringing groups of parents in that organization into active coöperation with the school. With his kodak he took snapshots of classwork, labora-

tory demonstrations, shopwork and primary activities, posting them on a large bulletin board which he set up in the leading store, with short, snappy explanations of what the school was doing for the boys and girls of Sleepy Hollow. He had slides made of the best of these pictures and inserted them among the advertisements in the local movie theater through the courtesy of the manager. He sent to every home each month a mimeographed bulletin telling of the work of the school. The English classes were encouraged to start a weekly news column in the local paper, bringing school events to the public eye. Before many months Neatem, according to the self-appointed critics, had "set the school on its feet."

A Winning Football Team

Now Neatem was not the type of egotist who thinks he must do everything himself. He was an organizer. He believed in managing other people's time to their advantage, and his, and the school's. Selecting and training his faculty now became his chief concern. Interest in the football team was sufficient to bring favorable action by the board upon his request for a special coach, and the team in its second season won the conference championship, and took Sleepy Hollow by storm. In music, the light of rivalry and competition was made to brighten the way as well. The promising Miss Sonora was enticed from a neighboring school where she had developed a glee club good enough to earn a free trip to the state music festival. Neatem lost no time in making her acquainted with his slogan and with what was expected of her.

Lest the reader begin to assume that our hero was a superficial superintendent, let it be said that underneath the frills of extracurricular activity which held the public eye, he believed in a solid foundation of regular work. He wrote to three leading cities for their modern courses of study. The faculty met, read, and adopted great blocks of up-to-date curricular material from these unquestioned sources of supply. Even old textbooks were not sacred to them. Sleepy Hollow children were asked to buy newer textbooks which the bookmen assured Neatem were then in use in the majority of the schools of the state, especially those schools which everybody knew were progressive.

It did not take Neatem long to discover that nothing adds to the confidence of a school board in its superintendent so quickly as being efficient in school business affairs. So he set out to save money and reduce the cost of running the school. He found a place to purchase towels and toilet paper at a saving. He invited the sectional basketball tournament to town and cleared enough money to pay for new suits for the local team. He avoided the necessity of purchasing new seats and desks by having the old ones repaired in the manual-training shop. By manipulating promotions in the grades, the entire salary of one teacher was saved. Competitive bids on sweeping compound and soap brought a 7-per-cent reduction on those items. All these things were noted with satisfaction by the three reactionary members of the board, being called to their attention with pardonable foresight.

Valuable Community Contacts

Nor did Neatem neglect the personal touch. He joined the leading lodge. He played golf on the new links, becoming a charter member of the club and bearing his share of the expense.

At school contests and programs he took up the tickets, thus meeting all comers and widening his acquaintance with parents and patrons. By carrying the athletic money to the bank he had an opportunity to pass the time of day with the banker, and many another contact was made among the business men in the same way. As an active member of the commercial club he made his value to the community felt by men with whom there was no other opportunity for acquaintance. Not the least of these methods of rubbing shoulders with his constituency was the church, where Neatem still taught the young folks' class, assisted in the choir, and paid his share toward the yearly budget.

Such a superintendent could not long remain unheralded outside the Sleepy Hollow district, and so, when the board of education in the county-seat town of Mediapolis near by set out one spring morning to scout for a superintendent, they drove first to Sleepy Hollow. Here they inspected the buildings, breathed the atmosphere of strict discipline, interviewed the leading personages of the town, and at last returned home with Neatem's signature beneath a salary figure which delighted Mrs. Neatem very much indeed. Sleepy Hollow folks commented with a sort of pride that they never had been able to keep a good superintendent long.

Organization in the Mediapolis schools was easy for Neatem. Many of the new things which he had started in Sleepy Hollow were already running. He sized up the situation and concluded that his main job was to be the improvement of instruction. In fact, the members of the board had told him as much in their first interview. So he set about to fill the bill. He was nothing if not systematic. He visited each teacher in strict rotation at first, getting around each week if only for ten minutes. He sensed the "atmosphere" of each classroom, and when he discovered that his time was needed more in some places than in others, he stayed longer there. He worked out a scheme of teacher improvement all his own. He had found in his own teaching that careful preparation of subject matter and a plan of daily procedure were the best insurance against disciplinary difficulties, and he reasoned that the teacher who knew that he was likely to drop in almost every day for an hour or so would soon discover for herself the importance of being well prepared. By this system, teaching would improve and difficulties disappear. Not ignoring up-to-date literature on teaching methods, he bought the latest texts on classroom practice and frequently suggested their use to teachers in difficulty. As for studying them himself, he found little time, amid his many duties, for such reading.

It had not taken Neatem long to discover that teachers do not appreciate teachers' meetings. His popularity with the faculty was assured, therefore, when he announced at the opening of the first semester that meetings would not be held regularly, but would be called only when matters urgent and specific demanded the attention of the group. Announcements to teachers were conveyed by notes and bulletins, placed in a handy set of "post office" pigeonholes in the office vestibule.

Striking Out for New Fields

Five years rolled by in Mediapolis. Neatem began to wear the rounded look of success. His word was listened to, his counsel sought, in matters of moment in the community. He was startled one day to realize that he had fallen

into the habit of taking the line of least resistance in decisions about his work. He caught himself up sharply. "Growing old," he said, "getting into a rut. I've stayed long enough in Mediapolis. I must look for a harder job."

Straightway he began to lay plans for a campaign. Although the board members of cities near by had, no doubt, heard of his success, he could take no chances. He accompanied the athletic teams on all trips to the larger towns, and made acquaintances aggressively. He renewed his lapsed membership in the state teachers' association and attended the spring meeting of his district. He entertained the bookmen and supply salesmen and accepted the latest gossip about possible vacancies. He even made a special trip to the city to make the acquaintance of the manager of an agency which had specialized, so it advertised, in the placement of superintendents. He came away from this interview with great hope, having listened to the story of the placing of a superintendent in a city near by.

Such energy could scarcely go unrewarded. Rumors were followed by authentic information to the effect that his friend Griggs of Steel City was "out" and that the board was considering candidates for his position. But Neatem was none of your rattle-headed seekers who drives the wheels off his car at the mention of vacancies. He reasoned that if he could not write a letter which would get the attention of the Steel City school board, it would do him little good to call upon them unannounced. The letter mentioned his having heard of their interest in candidates, touched on his period of service in Mediapolis, and invited them to make a trip to investigate his work. He was invited to meet them instead, and arrived at the meeting groomed physically and mentally to show his wares.

A Shocking Experience

Coming out 25 minutes later, his mind was in somewhat of a whirl. The Steel City board members, it seemed, had presumed to venture into the technicalities of school management to a degree he had not expected. What was his opinion of the junior college in a school like Steel City? Did he favor the establishment of a nursery school like that in Green Rapids? What should be the policy of the district toward paying out funds for school activities such as athletics, if they were not self-supporting? Could he furnish them with information as to the comparative cost of teaching Latin and manual training? Did he believe in teaching foreign language in high school at all? How were they to decide whether to establish a Smith-Hughes industrial department, as suggested by the state board for vocational education? Would such a department be a better investment than a night school for older workers who had not been able to complete their schooling? Could state money be obtained for the night school? How would he handle the problem of housing the children belonging to the fluctuating population of the tourist camps?

They had ventured to become personal with Neatem. How had he spent his summers for the past five years? What professional books had he read since last September? What magazines and books on other subjects did he read?

Neatem had common sense. He did not try to volley answers to all these questions as fast as they were served in his direction. He stood back from the net and took them on the bounce, suggesting the need of securing further information, even venturing the source of the necessary facts in several instances. He could not tell whether his questioners were satisfied or not. These men, he felt, somehow expected him to have the facts already at hand, unreasonable as that was. Their probing into his summers he

regarded as sheer impertinence, considering that a superintendent is employed for nine months only. Their questions about his reading he dismissed with the thought that if they had followed his tracks they would know how little time for professional reading a busy superintendent has.

The mails at last brought forth the Steel City postmark, but it carried a multigraphed letter explaining that "since a superintendent has been selected from 153 candidates, we are taking this means of notifying you . . . and of thanking you for your application, etc."

Further Campaign Efforts

With redoubled energy, Neatem continued the campaign. He was no quitter. Dozens of letters, continued hand-shaking, and judicious cultivation of contracts brought news of other vacancies. Invitations to make personal application were accepted, and a varied assortment of school officialdom met around board-room tables. Since he was quick to learn, Neatem picked up a great many points of view about school administration and the needs of boys and girls which had never occurred to him before, as well as many ideas with which his experience led him to disagree. He was able to venture opinions on problems which had never arisen in Mediapolis. But the results were strikingly the same. Sooner or later, he would mire down in the bog of problems which the members of these school boards hurled at him, and save his self-respect only by hard-earned poise and ready wit. Each encounter left him a little more shaken in confidence, and each belated notice of the filling of the position left him more puzzled.

Then he met the board at Valley City. He came upon their invitation, and presented his application in the well-organized little speech he had used so many times. After a grilling cross-examination, Neatem dropped into a chair in the anteroom to wait. The door had not been tightly closed, and heated words of debate came to him clearly.

"A nice-appearing chap," said the voice of the president, but the member who had led the questioning broke in: "I tell you, gentlemen, that fellow is content to be nothing more than a combination of pedagogical mechanic and community politician. We need more than a mere artificer in schedules and devices, and much more than a good mixer. Neatem is clever, but untrained. What we need, what every town needs, is an educational engineer, who reads the need of our children in the eternal verities as well as in the signs of the times, who has a background of a sound philosophy of life, science, sociology, economics and religion, and who lays out the activities in our schools in harmony with the best that the science of psychology has to offer about the way a child learns."

"My dear sir, that sounds very fine, but surely you don't suppose we can get an educational scientist to come out and devote his time to the school at Valley City. How many such men are there in the whole country? Neatem would get along well with the folks, and keep things running smoothly —"

"Running smoothly! Yes, but headed where? We don't know, and neither does Neatem. We must get someone who knows. I don't mean a specialized investigator who reduces this or that bit of pedagogical guesswork to scientific fact. I mean an engineer who knows the laws of social change and understands the signs of the times, who can read the formulas and blue prints laid down by educational scientists, and who knows how to use them in building and running a school to educate our boys and girls for life in a modern world. 'Rule of thumb' is gone in your business, John. It's going in edu-

cation, too, and with it the superintendent who merely 'picked up' the mechanics of his trade by a little cleverness on the job."

"Where can we find such a man?"

The Man Elected

"Gentlemen, I have here a recommendation from the dean of the department of education of our state university, suggesting a candidate by the name of Westover. In college his major subjects were biology and sociology. At the university his high scholarship in these sciences showed that he had mastered the basic knowledge which distinguishes the professional engineer from the mere craftsman. As to craftsmanship, he concluded his studies with some practical courses in educational administration, has taught on both elementary- and high-school levels, and is at present in his sixth year as superintendent of a school about half the size of ours. I found that he is on the staff of a leading educational journal as a reviewer of recent professional books, showing that he plans to keep up to date while on the job. Gentlemen, I move that we invite Mr. Westover to present his application next Monday evening."

As Neatem began his homeward drive through the darkness he sought to argue with the epithets which rang in his head. "Pedagogical mechanic, mere artificer in programs and devices — well, wasn't experience the principal thing? They'd find that they *did* need a 'good mixer' and 'community politician' for a superintendent before they were through." As the night hours passed, however, and the miles of road slipped by, the significance of the board's condemnation became clearer, and the direness of his failure settled down upon him. He could never become an engineer of the schools. His study of the basic sciences had been a perfunctory thing, back in college days, and he had developed no interest in reading. Courses in educational craftsmanship he had never studied, nor did he know how to begin. "Rule of thumb" and imitation of the other fellow had been his methods.

After the first shock of his discovery, Neatem settled back into the harness again at Mediapolis. He even obtained another three-year contract with a slight increase in salary. A sense of security and ease began to take the place of his former restless zeal. Things ran smoothly enough. People looked kindly upon him, and he on them. None of them suspected what Neatem knew in his heart, that he could never be more than a clever manipulator of devices in a place which cried aloud for an engineer and statesman. The thought brought bitter lines to his face and whitened his hair.

As his family grew up with increasing demands for clothing, and college expenses loomed in the offing, he resumed his old agency for encyclopedias and in the summer visited the rural townships again.

Neatem Takes a New Job

Once there was a sudden midyear vacancy in a county-seat town near by, and a delegation came to Neatem. Although the town was smaller in population than Mediapolis, they offered him a slightly larger salary. He was released, and moved his home to Larchwood. Beyond a new circle of acquaintances, the change made little difference in his life.

Years passed.

At last there came a day in Larchwood when it began to be whispered in the afternoon clubs of the women and knots of citizenry in the back room of the store, that the schools were not right, somehow, perhaps not up to date. A school-board meeting, called informally at Gresham's store, brought out the suggestion

(Concluded on Page 120)



JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS
William H. Schulzke, Architect, Moline, Illinois

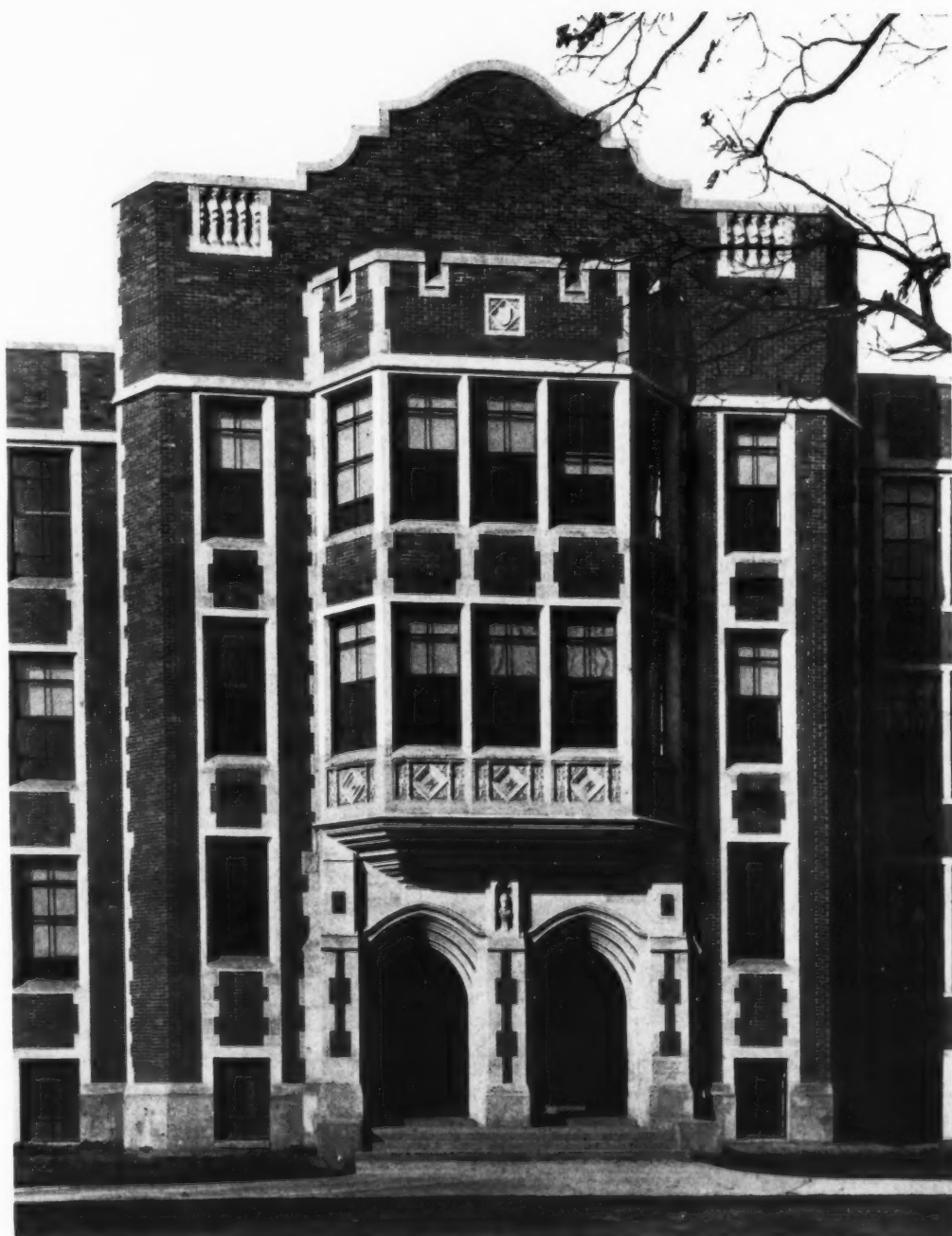
John Deere Junior High School, Moline, Illinois

Lewis A. Mahoney, Superintendent of Schools, and William H. Schulzke, Architect, Moline, Illinois

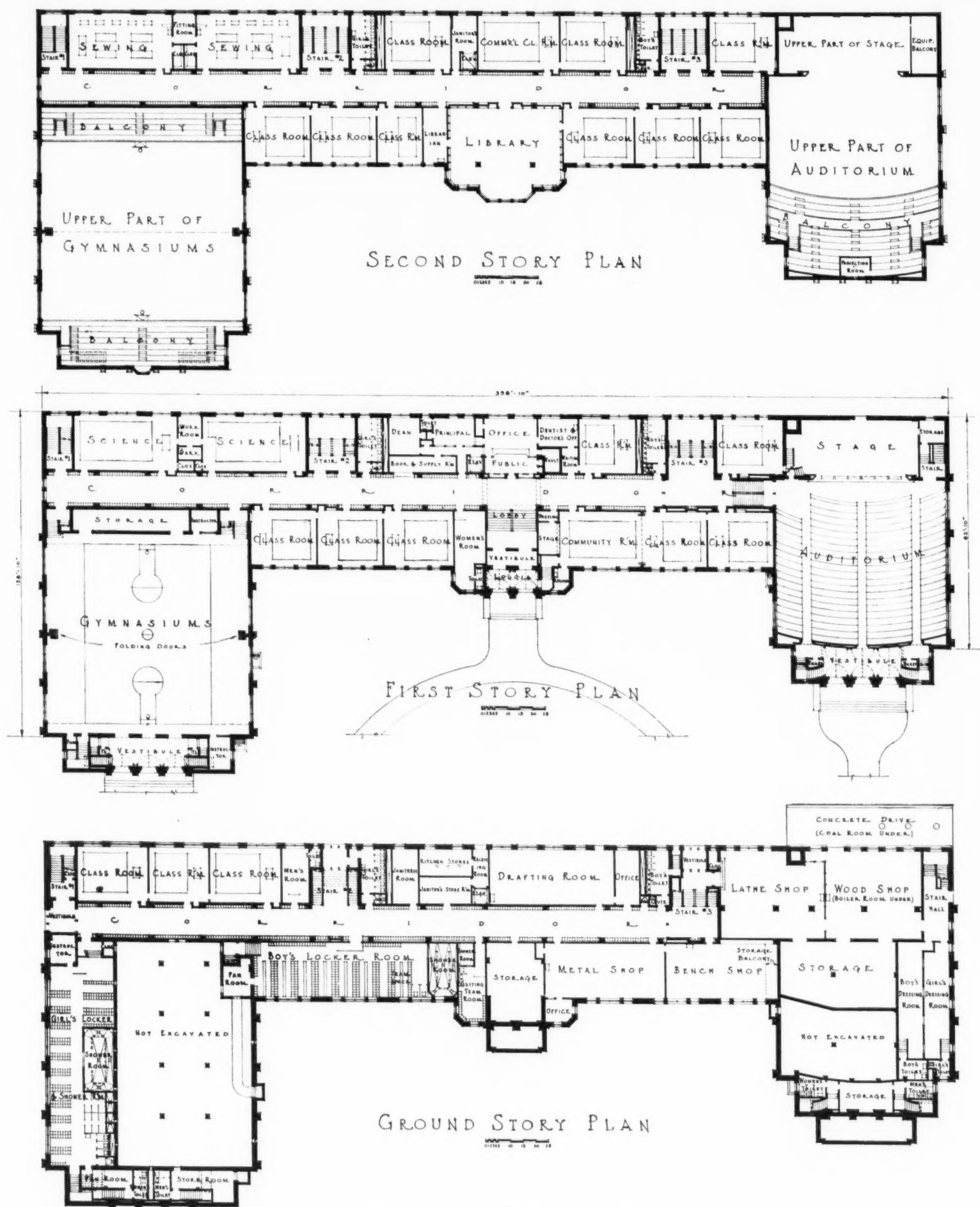
The new John Deere Junior High School of Moline, Illinois, completed last spring, is the first step in a building program approved by the Moline board of education, contemplating not only additional new buildings, their proper location and size, but including also a plan for reorganizing the elementary-school districts, comprising grades one to six, inclusive. Many cities have recently become aware of the fact that their elementary buildings are uneconomical from the standpoint of costs of supervision and of mechanical operation and accommodation of pupils, because the structures are both too small and poorly situated. Allowing one-half-mile radius for travel distance of elementary pupils, all but two elementary districts out of thirteen in Moline overlap, all of them as much as one fourth of a mile and several of them nearly one-half mile. The building program adopted proposes to rectify this condition by larger and properly placed elementary buildings as they are needed.

In order to meet the additional expenses of the 6-3-3 plan and to provide a sinking fund for the erection of new buildings without the necessity of bond issues, the board of education submitted a referendum to the people some three years ago, increasing the tax for educational purposes by approximately \$65,000 annually and the tax for building purposes by approximately \$100,000. Both these measures, together with a bond issue of \$470,000 were authorized by the voters. Sites were at once purchased for two new junior high schools.

The first new junior-high-school building, which is named in honor of John Deere pioneer manufacturer of steel plows, cost approximately \$500,000 for construction and \$60,000 for equipment. The school, located on a plot of about twelve and one-half acres, is in modern Gothic style of architecture, constructed of hydraulic pressed brick with Bedford stone trimmings. The building is fireproof throughout.



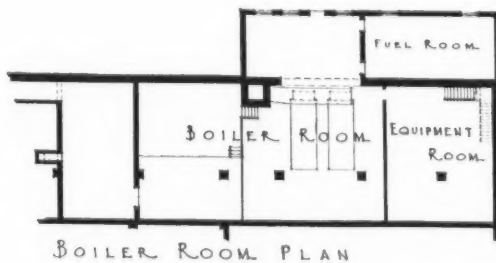
ENTRANCE DETAILS, JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS
William H. Schulzke, Architect, Moline, Illinois



JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS
William H. Schulzke, Architect, Moline, Illinois

The gymnasium, shower rooms and locker rooms comprise the left wing of the building, and the auditorium, with a seating capacity of 1,000, occupies the right wing. Both of these units can be used independently of any other part of the building.

The gymnasium is fitted with electrically operated, soundproof folding doors, and each division has a complete equipment of apparatus so that two classes may be conducted at the same time. It has two concrete balconies seating approximately 450 people for all general exercises and can be equipped with movable



JOHN DEERE JUNIOR HIGH SCHOOL,
MOLINE, ILLINOIS

bleachers on the main floor to accommodate some 300 additional spectators. Provisions are made for two basketball courts for practice purposes and one large court with bank board of boiler plate which can be immediately elevated to the ceiling.

Another unique feature of the building is a community room on the first floor just at the right of the main entrance. This can be used for various purposes, such as club meetings, parent-teacher gatherings, etc., without access to the main building. The room is fitted with folding doors so that two extra-large classrooms may be

thrown together, providing seating accommodations for more than 200 people. It has a small stage, a dressing room and a kitchenette, and is equipped with tablet-arm chairs, or steel folding chairs as occasion requires.

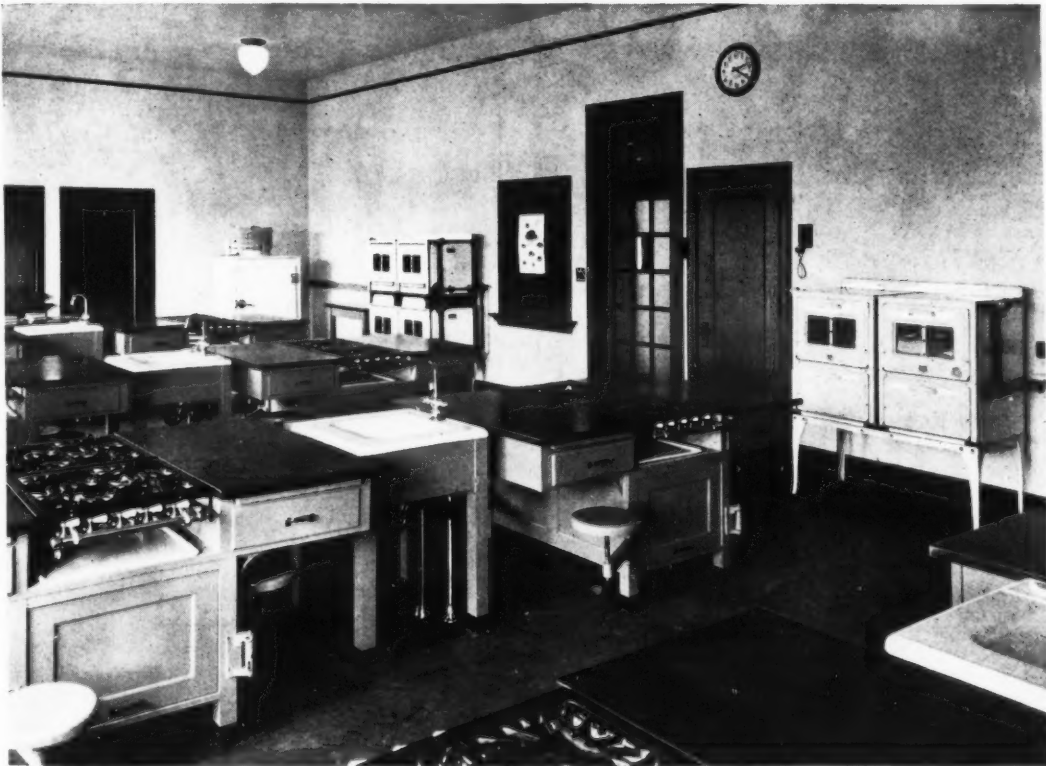
The dividing partitions of all classrooms are built of hollow gypsum tile, making flexible the size of the classrooms from front to back. Each instruction room is provided with an electric outlet for use in visual education purposes, is fitted with slate blackboards, has cork display boards, and cork bulletin boards. Each has a built-in teacher's cloak closet, a bookcase, and a filing cabinet for preserving supplementary and illustrative material. English, history, and other special rooms have additional built-in cases for library purposes.

The building is equipped throughout with the most modern type of movable furniture. The floors, except in the corridors which are of terrazzo, are 9-inch squares of a noiseless rubber tile. The windows throughout the building are steel sash, and the exterior doors are of hollow steel. The classroom doors are of oak, the panels glazed with tapestry glass.

The manual-arts department occupies practically the entire ground floor. The home-economics rooms are fitted with specially built benches, providing private equipment for each student and ample cabinets and teachers' demonstration desks, etc. The wood trim of this department is green, and the equipment is a lighter shade of green in lacquer finish. This department includes also a model demonstration



AUDITORIUM VESTIBULE, JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS
William H. Schulzke, Architect, Moline, Illinois



DOMESTIC SCIENCE DEPARTMENT, JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS
William H. Schulzke, Architect, Moline, Illinois

room which is to be furnished from time to time as living room, dining room, kitchen, bedroom, etc. It is equipped with mechanical refrigeration.

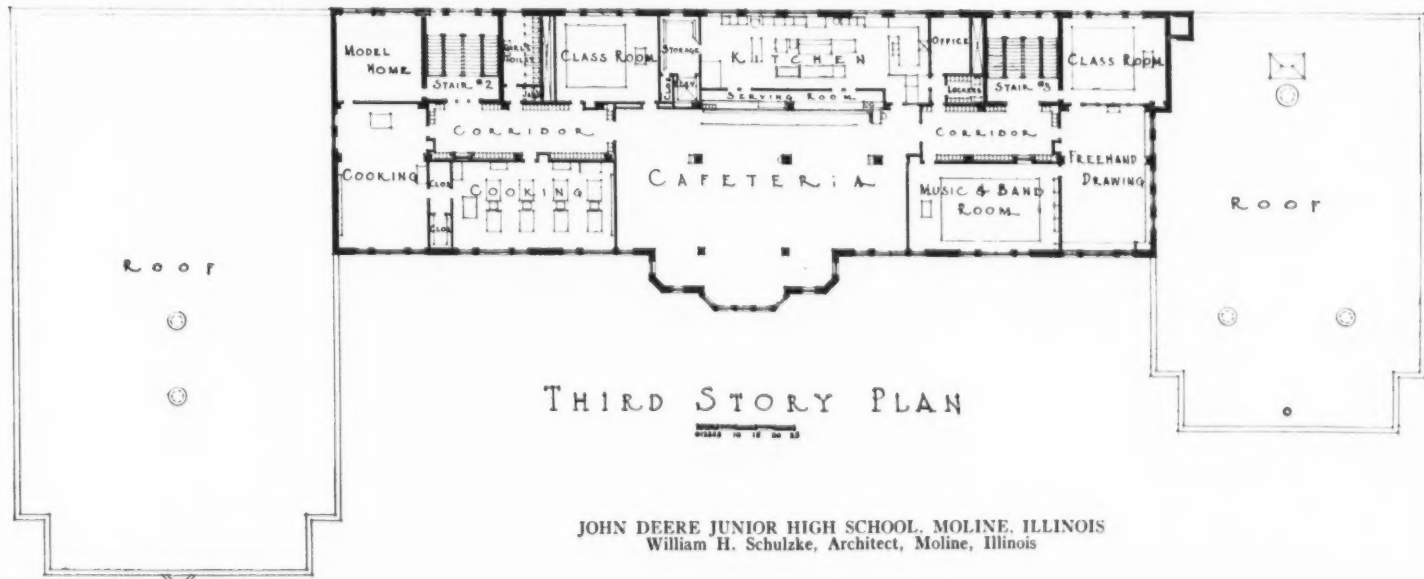
The building is equipped with a differential vacuum-steam heating system in connection with unit ventilators. A unique system of ventilating the pupils' lockers is used. The ventilation louvers are placed at the bottom of the locker door instead of at the top and 64 half-inch holes are bored through the shelf and top of the locker. The lockers are then set flush with the corridor walls and connected at the top with the vent shafts and carried to the main exhaust fan on the roof, which provides ventilation for the entire building.

The auditorium, the gymnasium, the offices, and the community room are on three separate heating sections, enabling the use of each of the units independently of the rest of the building.

The building is situated on the side of a hill, so that it has been possible to place the heating plant entirely outside of and on a lower level than the ground floor of the building. The concrete driveway permits delivery of coal from the adjacent street level to the building and the delivery of all supplies to storerooms on the same ground level.

The building is provided with an electrically operated elevator to deliver equipment or supplies to any floor.

(Continued on Page 122)

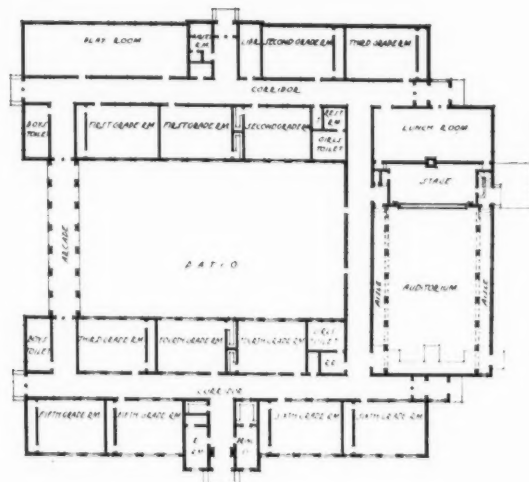




DELAND GRADE SCHOOL, DAYTONA BEACH, FLORIDA
Harry M. Griffin, Architect, Daytona Beach, Florida



AUDITORIUM, DELAND GRADE SCHOOL, DAYTONA BEACH, FLORIDA



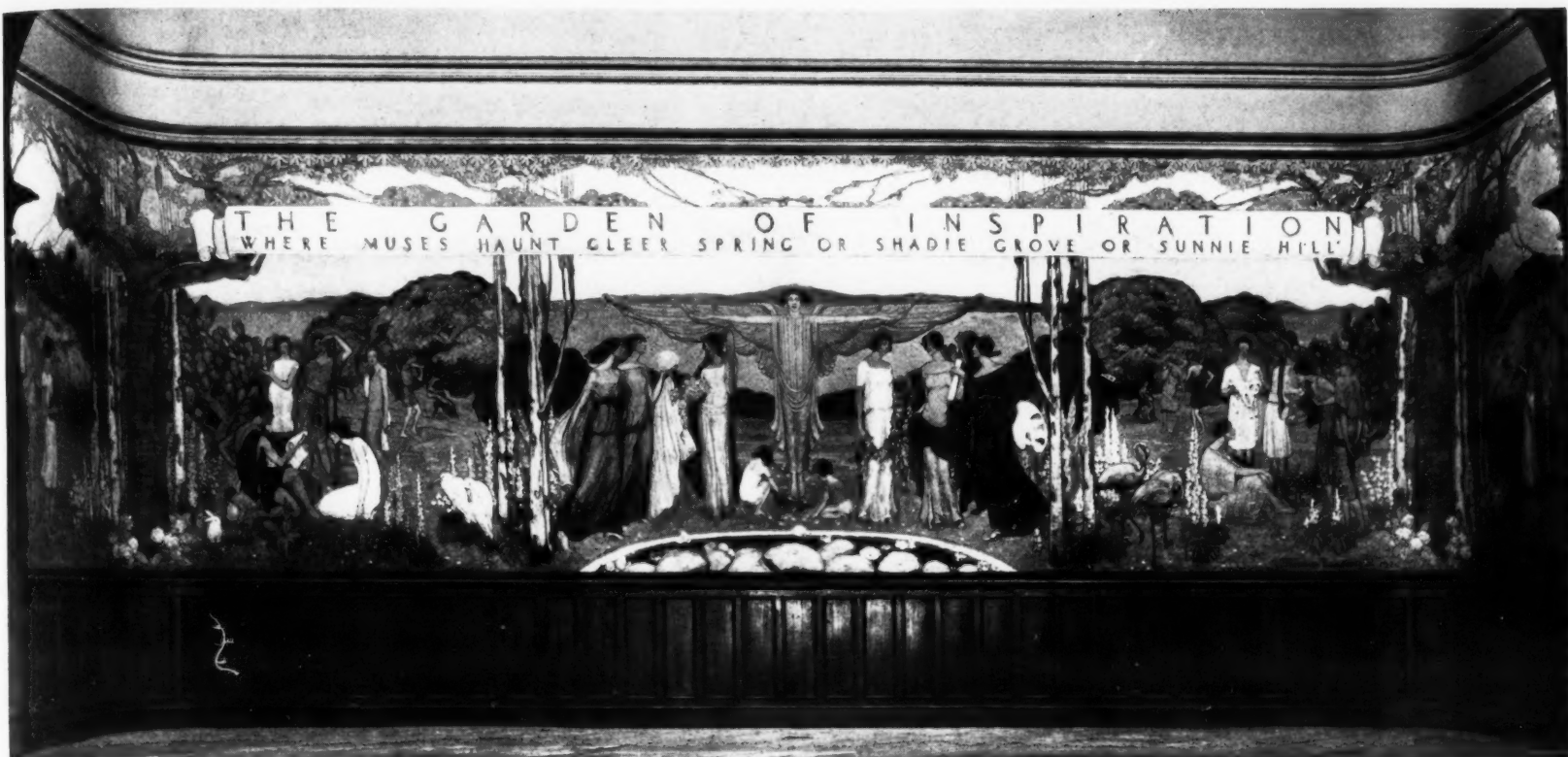
FLOOR PLAN, DELAND GRADE SCHOOL,
DAYTONA BEACH, FLORIDA



CORRIDOR, DELAND GRADE SCHOOL,
DAYTONA BEACH, FLORIDA



DELAND GRADE SCHOOL, DAYTONA BEACH, FLORIDA
Harry M. Griffin, Architect, Daytona Beach, Florida



"THE GARDEN OF INSPIRATION" IN THE WADLEIGH HIGH SCHOOL, NEW YORK CITY, N. Y.
By Florence Lundborg

Mural Paintings in Schoolhouses

Chas. G. Loring, Architect, Boston

The era of public-school decoration limited to chalky-white plaster casts and sepia portraits in black frames of Washington and Lincoln, Longfellow and Whittier, is yielding to that of colored prints on the classroom walls, and mural paintings in the entrance halls and auditoriums. In the lecture periods, moving pictures supplement or supplant the old-time diagrams and charts. Color, action, drama, are all used to etch indelibly the educational precepts and ideals.

The art journals have ignored this suggestive renaissance, even though the first fruits are full of promise. If the movement for inspirational frescoes is popularized, it will stimulate an unself-conscious art sense in this country's incipient citizens. It will also give opportunity to those painters who crave in their hearts—it may be only for "just once"—the chance to spread their powers by square yards and to meet the challenge of the intricate balance of realism and convention, structural function and perspective, simplicity and richness, pure design and expository context, as set forth by the muse of mural decoration.

The Society of Beaux Arts Artists and the

Society of Mural Painters have been sponsors for more than one painting in the New York City Schools, but where the art organizations are backward, the American Legion and the Rotary Clubs have played the patron as in Ely, Minnesota, and in Michigan City, Indiana. Elsewhere the school alumni have made memorial gifts or individuals have endowed the artist's labors. Publicity via the news item or in the magazine articles help to bring the artist and his field together.

Endowment for Mural Paintings

An endowment for first-rate murals in our public schools might sow more cultural seeds than if "entombed" in the museums and galleries and at the same time it would nourish a method of expression most intimately related to architecture.

No doubt some of the paintings would not be inspired or inspirational. No doubt a few, a very few of them would be horrid. The same might be said of schoolhouse architecture, but for all that we do not stop trying.

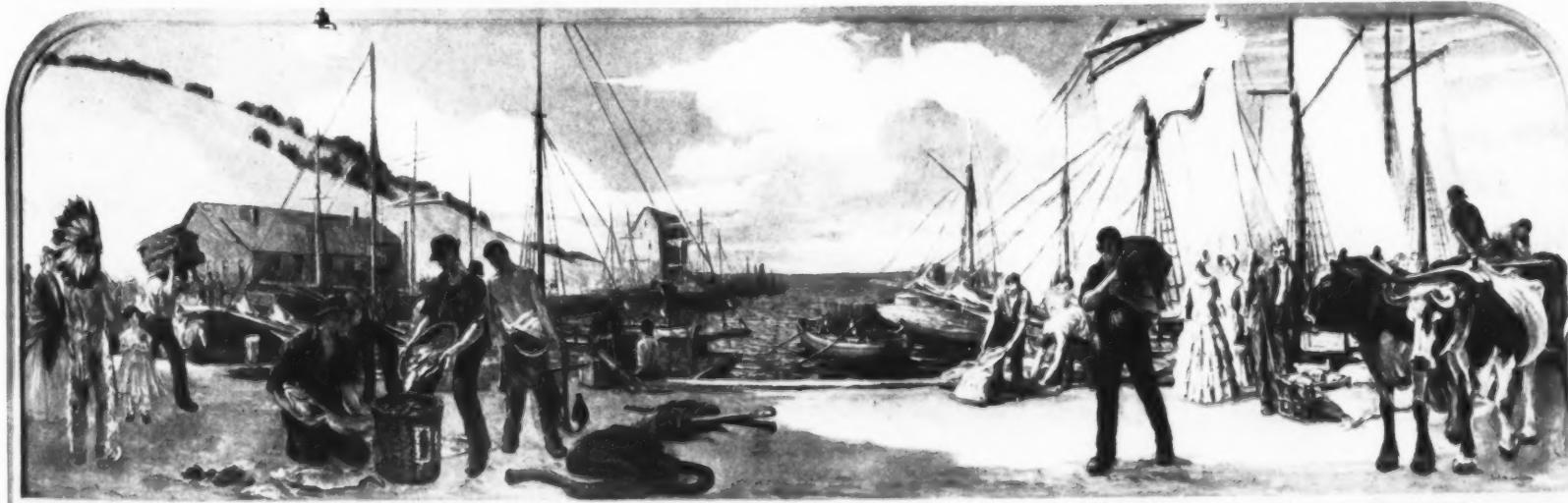
Mural paintings must be created for sheer

beauty, yet often a secondary object inspires their inception in public buildings. The money is voted for the historical scenes on the walls of the state capitol as an expression of civic pride; the court house is decorated with allegorical pictures to augment the majesty of the law; and in the natural-history museums the frescoes are sublimated plate illustrations.

Although more public schools are built from the taxpayers' money than all the capitols, city halls, and courthouses put together and the schools are used by many, many more of the public, and that at the most impressionable age, yet mural paintings are few and far between in the academic shades. Perhaps it is just because there must be so many new schoolhouses that the extra 5 per cent of the cost for dignified, permanent, pictorial decoration is so hard to come by.

Choosing the Subject Matter

There are two general fields for the choice of subject matter—the historical and the symbolic. The two impressive scenes placed by the board of education on either side of the pros-



"LAKE SHORE" IN THE SENIOR HIGH SCHOOL, MICHIGAN CITY, INDIANA
By Robert W. Grafton

cenium of the De Witt Clinton School in New York (Mr. C. B. J. Snyder, architect) are striking examples of the first classification. The paintings, about 20 ft. square, were executed by C. Y. Turner in 1906 and represent the opening of the Erie Canal in 1825 when Governor Clinton poured the waters of Lake Champlain into the Atlantic.

The figures are dignified and arresting, the presentation enriches the hall, but is properly subordinated to the architecture and there is no suggestion of the easel picture.

For the same building the Society of Beaux Arts Architects held a competition in 1915 for a lunette as part of the decoration of the entrance hall. The prize was awarded to Mr. Jay Van Everen and the subject was Youth in the pursuit of Truth and Knowledge.

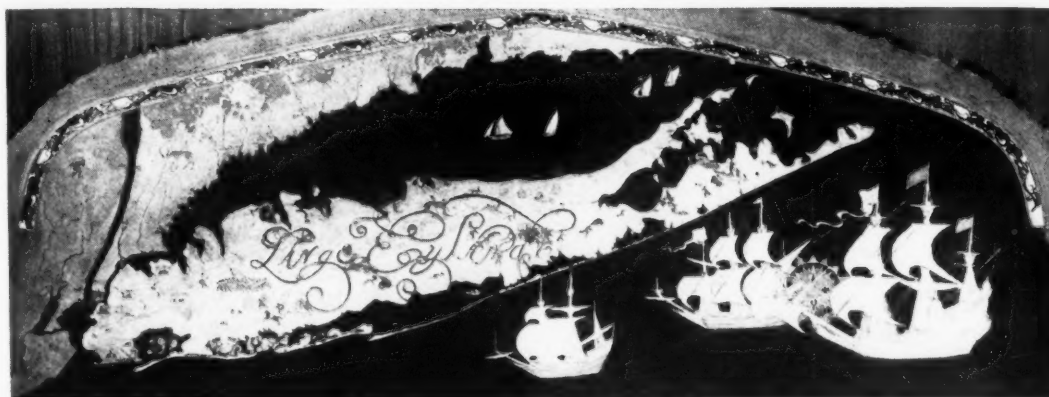
Another striking historical tableau is the group of three panels in the study hall of the senior high school in Michigan City, Indiana. They are the gift of the painter, Mr. Robert Grafton, and represent the varied life at the harbor entrance in the early days, with the lake and the rounded sand dunes as background. The central picture is 10 ft. by 34 ft. and the side pieces each 10 ft. by 4 ft. 6 in. Owing to the blankness of the surrounding walls, the paintings, restrained as they are, seem to overpower the study hall.

The long triptych on the walls of the library in the high school at Hibbing, Minnesota, was presented by Mr. D. T. Workman in 1914, and later transferred to the new building. It is historical and yet contemporary, and depicts with powerful but composed realism, iron mining, transportation of the ore and its conversion into steel.

Considering the pupil audience of 2,000, Maynard Dixon's frieze "California, pais del Sol" in the Oakland Technical High School (J. J. Donovan and H. Hornbostel, architects) is romance and history made visible. The "Beauty



EXPLORER LANDING ON LONG ISLAND



DECORATIVE MAP OF LONG ISLAND AND THE SOUND

These two panels are taken from the mural paintings depicting the lives of the early settlers in and about New York State. The paintings are in the Washington Irving High School, New York City, and are the work of Mr. Barry Faulkner.

and the Beast" of California, beneath a modernistic sun, are surrounded by sixteen realistic and stirring figures vividly depicting the natives and the successive tides which swept over them. Here is delineation to arouse the creative impulse or an interest in native background!

Of the second field, the symbolic, the two paintings by Mr. D. T. Workman in the high

school at Ely, Minnesota, are outstanding examples. They visualize "Education" and "Industry" and in each a group of figures flooding across the lower margin and typifying everyday pursuits is dominated by three gigantic forms in the background. In "Education" the three draped and seated symbolic figures represent "Applied Art," "Music," and "Literature." In



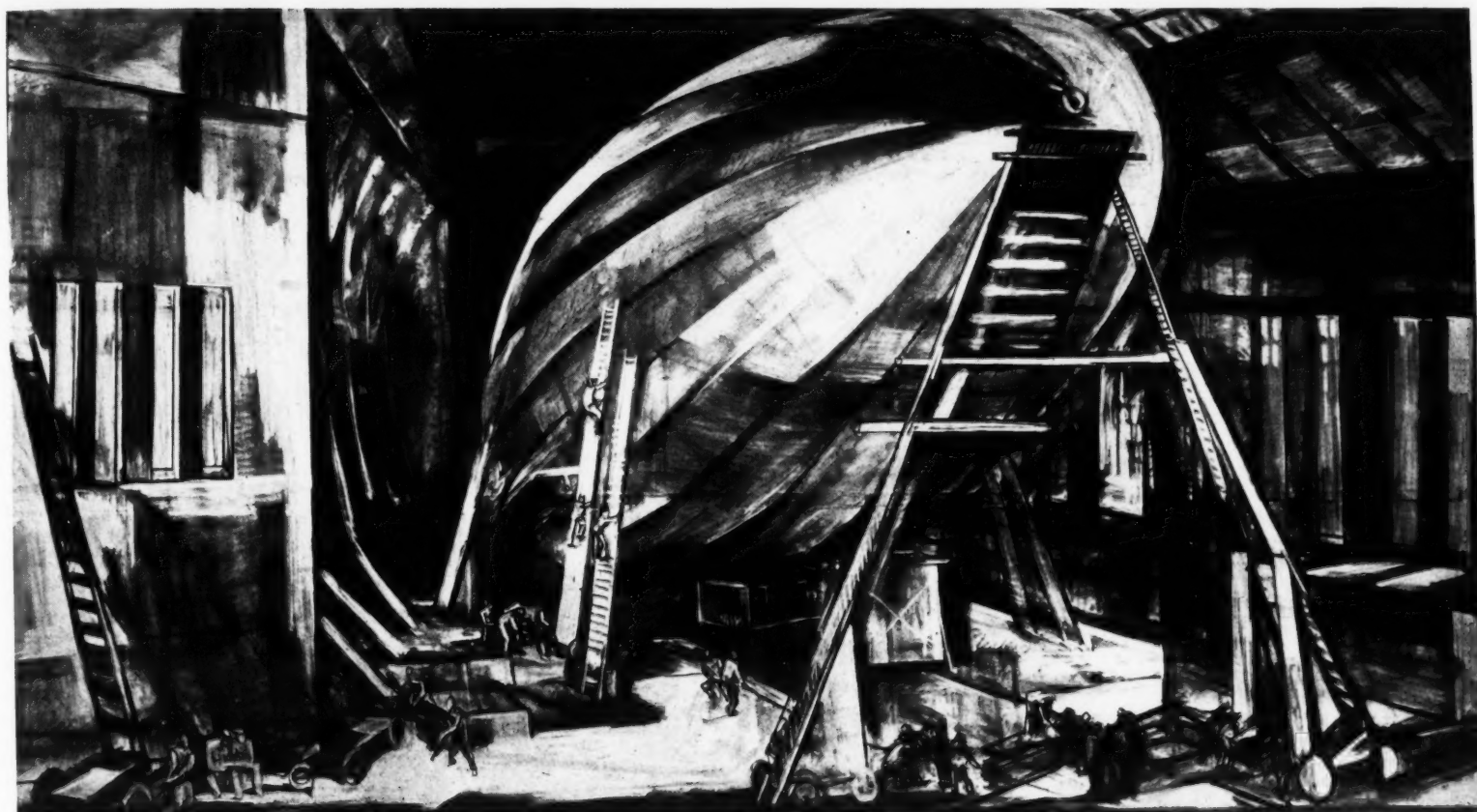
"LEIF ERIKSON"



"GOVERNOR WINTHROP"
MURALS IN THE NORTH JUNIOR HIGH SCHOOL, WALTHAM, MASSACHUSETTS
By Russell T. Hyde



"GEORGE WASHINGTON"



"THE BUILDING OF A ZEPPELIN—COMMERCE OF THE FUTURE" IN THE BOYS' TECHNICAL HIGH SCHOOL, MILWAUKEE, WISCONSIN
By Vodav Vytlačil

"Industry" the heroic figures depict "Science," "Commerce" and "Agriculture."

There is a quality which arrests the imagination in the Ely panels which is lacking in the 24-ft. painting in the East High School, Minneapolis, representing "The American School." The stiff formality of the fourteen pupils, clearly depicting fourteen points in the curriculum, seems to illustrate what the well-dressed student will wear rather than the inscription "He hath no power who hath not power to use."

In this same field is "The Garden of Inspiration" painted by Florence Lundborg around the walls of the auditorium platform in the Wadleigh High School, (C. B. J. Snyder, architect) in the Borough of Manhattan. The rich intricacy of the design is interesting but the inspirational significance is none too obvious.

The dozen panels of Old Manhattan from the brush of Barry Faulkner are admirably framed in the stained-wood paneling of the foyer in the Washington Irving School, New York City.

Early settlers, bloodthirsty redskins, delightful beasts, combined with conventionalized land- and seascapes, all draw their interest from the historical features and from the decorative handling. This series is noteworthy for the cooperation of painter and architect.

A third type of subject less frequently adopted in the special field is the landscape. In the Irving School kindergarten, Minneapolis, Mr. Workman has placed four charming views of the local park system representing the four seasons and has correlated them by the color harmony and the continuation of a band of water through the four panels. The scale of the design, the low position in the room, and the simplicity of technique have been attuned to the small children in the kindergarten.

The four scenes by Vodav Vytlačil and Armin Hansen in the Boys' Technical High School, and in the Washington High School in Milwaukee, are by, of, and for this decade; they picture a phase of our civilization truthfully — perhaps

as precept, perhaps as warning.

The process of selection of historical incidents was entertainingly met by the committee in charge in the North Junior High School (Charles G. Loring, architect) in Waltham, Massachusetts. The building was started shortly after the armistice and the natural reaction was to include some memorial feature for the local soldiers of the world war, the Revolution, the Civil, and the Spanish wars. Four panels, 15 ft. high and 8 ft. wide were available and it was decided that to fill them all with battle pictures would lay undue emphasis on militarism. Russel T. Hyde, the painter, then prepared four sketch studies depicting the peaceful developments which originated in this country in Waltham, including the first school for trained nurses, the first watchmakers and the like, but these did not afford sufficient dramatic quality to interest the pupils. Finally incidents from the history of Waltham were selected; Governor Winthrop who surveyed a highway to just be-



"THE AMERICAN SCHOOL"
PANEL DECORATING WALL OF STUDY HALL, EAST HIGH SCHOOL, MINNEAPOLIS, MINNESOTA
By D. T. Workman



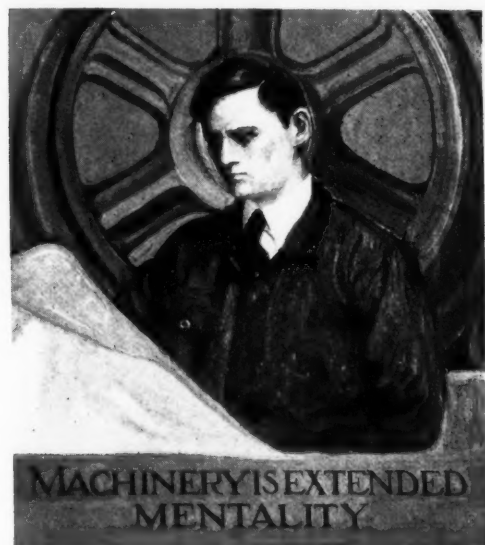
The Kindergarten room in the George F. Stoneman Elementary School at San Marino, California, is decorated with a charming frieze, by Lucile Lloyd, of Hollywood. The frieze includes the most interesting characters in child literature and is done in brilliant colors. The tinting of the walls above and of the blackboards below have been harmonized in dull colors to better bring out the brilliant figures of the paintings.



"THE WIZARD OF OZ," "THE HARE AND THE TORTOISE," "ADVENTURES OF A BROWNIE," AND "PUSS IN BOOTS"

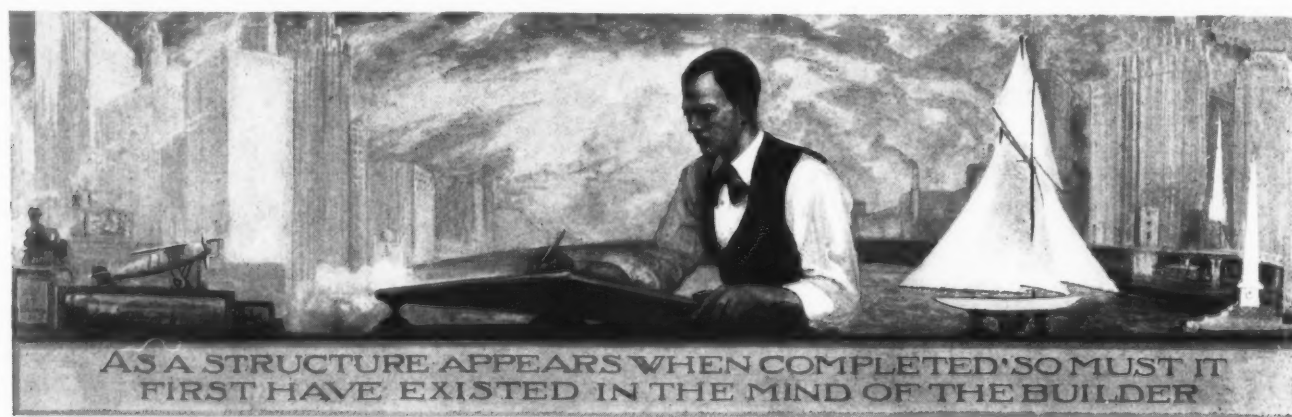
This cartoon for the frieze in the Kindergarten room of the George F. Stoneman Elementary School in San Marino, California, is typical of the charming work done by Miss Lucile Lloyd of Hollywood.

yond the site of the present schoolhouse and naïvely wrote in his diary "this is probably as far west as a road will ever have to be built"; Washington with the Continental army on his way toward Boston; the oldest church built in Waltham with Governor Gore and his Lady leaving it, to express the refusal of the civil authorities to abide by the instruction of the established church. The fourth picture is perhaps more mythical than historical, as it depicts Leif Erikson who is purported to have sailed up the Charles River and landed near Waltham.



CARTOONS FOR MURAL PAINTINGS IN TILDEN TECHNICAL HIGH SCHOOL, CHICAGO
James E. McBurney, Artist

Geographically, these examples are widely scattered from the eastern seaboard to the Pacific, and, if they are few in proportion to the number of the schools, they are many in relation to what existed twenty years ago. It has been said that "as a means of inspiration, they far surpass sculpture and other forms of ornament, and they have a more lasting and continuous effect than music." If school boards can see the truth of this, in the next twenty years, this rich field opened to the mural painter will reap a harvest in inspiration which contact with beauty will give the children of tomorrow.



DETAIL OF THE MURAL PAINTINGS IN THE TILDEN TECHNICAL HIGH SCHOOL, CHICAGO
James E. McBurney, Artist

A panel from a series of mural paintings in the library of the Tilden Technical High School, Chicago. The artist, James E. McBurney, has painted a series of 48 panels, depicting master-craftsmen and their ideals of industry and labor. Students of the school were used as models for twelve of the larger panels. The funds for the paintings were taken from an account which originated in the purchase of a Liberty Bond during the World War. Teachers and pupils contributed to this fund during the past twelve years.

Check List of Steps Used in Scheduling a Modern High School

C. W. Ricksecker, Principal, Chaney High School, Youngstown, Ohio

To apportion one's time for the greatest efficiency in caring for the many and varied duties that arise in a modern high school is of great importance. The amount of time, therefore, that is to be allotted to the effective scheduling of the student body, including the most desirable placement of teachers in the school's program, needs special consideration. Much repetition of routine work can be avoided and valuable time conserved for teachers and administrators, if a definite system of organization is outlined. This should be especially helpful to principals of little experience. Such a plan should include the steps to be taken in the early part of each semester, those necessary as the semester progresses, those specialized processes that are extremely nerve-racking and energy-consuming as the semester closes, the summer duties, and those incident to getting the school organized at the opening of the semester for which all these suggested steps have been taken. In systems where semiannual promotions prevail, the summer duties of semester significance need to be contracted to the period of a week-end.

Suggestive Form for Check List

Theoretical training in schools of administration and practical experience in small and large high schools in communities of varying interests combine to suggest, in the form of a check list, the steps that have been found helpful in remote and immediate planning of the school's program. The order of steps is also of great value. Principals and teachers delegated with these tasks may clip this list, or such sections as apply to a particular community, and paste it parallel to a vertically ruled sheet with dated headings, and check semester after semester as each process is completed.

I. Duties That Arise Early in the Semester

1. Hold a faculty discussion on changes necessary for the coming semester:
 - a) Teacher load.
 - b) Curriculum improvement.
 - c) Activity changes.
 - d) Anticipated enrollment.

2. Discuss with principals of the contributing schools the approximate number that complete each school and become charges of the high school.

Discuss unusual child-accounting problems as overcrowding, changes in boundary lines, and anticipated growth.

3. With all the necessary data available, hold a conference with the superintendent and others interested, and propose the general plans for the next semester. These should harmonize with the standards of accrediting agencies, the financial status of the community, and the program of education that is to be effected.

This conference should result in a decision on the

- a) Personnel available.
- b) The housing facilities to depend upon.
- c) The limits of the community to be served.

4. See to it that the necessary printed forms are available:

- a) A blank master schedule with vertical columns headed by the room numbers and horizontal lines for all the periods of the week.
- b) Programs of study with explanatory notes.
- c) Enrollment blanks arranged for data covering the present and coming semester, with a blank schedule on the face, and the curricula of the school on the reverse side.
- d) Schedule cards for students and office.
- e) Class-roll sheets or class cards.
- f) Office information cards for new students.
- h) Permanent record cards for new students.
- i) "Add to" and "Drop from" slips used in shifting classes.

II. Duties Incident to Scheduling as the Semester Progresses

1. Give publicity to curricula to be offered by
 - a) Holding "8A Night" for conferences.
 - b) Sending printed matter to contributing schools.
2. Secure the enrollments from former students and the contributing schools through their principals or teachers or a representative of the high school.
3. Enter on the enrollments such special activities as band, orchestra, senior or other homeroom numbers, dramatics, glee club, public speaking, cafeteria or other duty that may have been neglected at enrollment.
4. Examine all enrollments to see that required subjects are properly entered, that all subjects chosen are in accord with the curriculum of the student and that they lead to graduation.
5. Tally the subject count to determine the number that will take each subject and from these figures the number of sections required in each subject.
6. Determine the number of hours of classroom, study hall, and special duty per day or week necessary to carry this schedule and from these results the average teacher load.
7. List the teachers available for each subject and grade with the teachers' choice ranks accompanying each.
8. Make a skeleton form showing all the sections to be given in each subject preparatory to mimeographing later.

III. Duties of a Highly Technical Nature

1. Fill in the master schedule so that it will indicate the class and teacher in each room at each period of the week.

Begin with double-period classes such as industrial work, singletons next, and classes of many sections last.

Fill teachers' schedules, the skeleton form, and schedules for regular groups, as 7A1, at the same time as the master schedule.
2. Check the master schedule for senior academic, junior commercial, etc., to avoid conflicts.
3. In schools with continuous programs during the noon hour, check to see that teachers and pupils will have a free period for lunch.
4. Cross check the master schedule against the teachers' schedules for accuracy.

Check the regulars' schedule against the master.

5. Mimeograph the schedule developed from the skeleton form to show the sections in each subject, giving period and room number of each that many copies are available for scheduling.

Check the mimeographed schedule against the master.

6. Attach headings to class rolls to correspond to every class that is to be given.

7. Using a limited sampling, test the schedule before releasing it for general use.

IV. Procedures That Fall in the Last Week of the Semester

1. Hold a faculty meeting to explain the scheduling procedure:

a) Efficient plans for making a trial program, entering it on card with accompanying section and homeroom numbers indicated, all of which may be done in one classroom.

b) How to make class rolls, giving names and homeroom numbers of all students, which may be done in an adjoining room.

c) How schedulers will be warned when certain sections are filling too rapidly.

d) How to check schedules for accuracy.

e) Designate who shall be in charge of each step.

2. Select a dozen high-school students, preferably those commercially trained, to aid in making duplicates of students' schedules, and keeping all enrollments, cards, and office records in file. Make definite assignments to all.

3. Assign enrollment blanks to teachers and staff to work on at vacant periods, outside school hours, and following shortened sessions. As each step is finished the teacher completing it signs his initials in a specially labeled place on the enrollment.

4. As inspection of rolls show that certain classes are leading in numbers, report to those making out schedules to dodge or eventually avoid certain sections.

5. When all schedules have been made, duplicated, and filed, have committees:

a) Cross file the enrollments, office and students' schedules, and office information cards, making notes of those missing from each file. Withdraw any out of place and file.

b) List names and homeroom numbers of students due in study hall at each study period.

c) Make homeroom lists of those in study hall or other homerooms who do not become automatically listed in making class rolls.

d) Make the count of class numbers from rolls and insert number in each class on a mimeographed schedule.

V. Summer Duties

1. Correct errors detected in cross filing by committees by supplying missing cards.

2. Copy all marks made at the close of the semester on the permanent record cards, and remove to dead file the cards of withdrawn pupils.

Check permanent records to discover if all students are following their curricula. If not, revise their enrollments.

3. Equalize sections of each subject if any have become too large, correct class and study-hall rolls when shifting is done.

4. Send notices to all prospective students marked "Out of School" by the census to appear for enrollment before the opening day.

Do the same in the case of those who were reported in the daily press as graduating from contributing schools, but were overlooked at enrollment time.

Schedule these and some who may have made summer credits in the same manner as regular cases.

5. Invite all students, beginners to "Freshman Afternoon," and members of the faculty to the school the week before the opening of the semester, students to receive their programs, and teachers to acquaint themselves with the planned administration.

6. Publish a newspaper handbook which answers all questions that may arise, preferably before the opening day, and make it available to all students and teachers.

7. Mimeograph special notes to teachers, explaining how the new schedule is to be put into effect, and assign all necessary special duties.

(Concluded on Page 122)



"LA SALLE'S SAILING VESSEL, GRIFFON" IN THE WASHINGTON HIGH SCHOOL, MILWAUKEE, WISCONSIN
By Armin O. Hansen

THE AMERICAN School Board Journal

EDITORS:



WM. GEO. BRUCE

WM. C. BRUCE

School Administration and the Business Depression

IT is interesting at this time to note just how and to what extent the prevailing business depression is affecting the activities in the field of school administration. At the outset the statement can confidently be made that, in the main, as far as the country at large is concerned, there have been no sweeping changes in the expenditures for school purposes.

The great majority of school bodies have renewed their budgets upon last year's basis, have reemployed the same forces at the same salaries, advanced their school-building programs in the usual way, and have engaged in no curtailments as far as their expansion plans are concerned. In fact, in most school centers there has been no discussion as to retrenchments. The school treasuries are amply provided with means to carry on in the process of education without hindrance or embarrassments.

There are sections of the country, however, where the financial pinch has set in. Property valuations have declined in consequence of which the school budgets had to be pared down to lower figures. Salaries were cut, school terms were shortened, new bond issues were deferred, new building projects had to be abandoned, and special studies were eliminated. While in many instances such retrenchments were made a matter of necessity, in others they were made merely in response to the taxpayers' demands for greater economy. A state of mind rather than a condition determined curtailments.

School authorities, on the whole, have not been unmindful of the unemployment situation. They have ordered repairwork, additions to the school plant, and even new building projects in order to give employment to those in need. Community self-interest has been greatly stimulated. Home talent has been favored in the teaching service, resident workmen have received preference over outside labor, and orders for school supplies have gone, where possible, to local merchants.

The reports in the building field would indicate that a decline in the construction of new schools had set in. On the other hand, it is found that greater attention is being paid to the matter of maintenance of present structures. The rehabilitation and repair labors are more comprehensively engaged in.

Using the Public Schools for Propaganda Purposes

MUCH has been said in the past about using the schools as a clearing house for the exploitation of the fads and foibles of a modern day, and for the selfish promotion of special interests.

Periodically, sensational articles appear in the news columns of the public press to the effect that the public schools are being flooded with propaganda literature on this, that, or the other subject. A year ago it was said that the public utilities were exploiting the schools. More recently it was stated the champions of the League of Nations were flooding the schools of the land with propaganda literature.

Since the acceptance or nonacceptance of propaganda literature is entirely subject to the school authorities themselves, it would seem that the sounding of an alarm is entirely superfluous and unwarranted. The school authorities are entirely competent to judge for themselves whether to allow the propaganda literature to go into the schools or to go into the wastebasket.

Moreover, the sensational warnings proceed upon the assumption that a superintendent of schools or a board of education is incompetent to pass judgment upon what to admit and what to reject. Hence the infliction of parental guidance. Most of the public-school bodies have fixed rules on what may or may not be exploited in the schools.

American business enterprise may advise people to drink more milk, eat more prunes or consume more bananas. Such advice may be wholesome and timely. But that does not mean that the schoolhouse must disseminate that advice. There are those who do not believe that the government should compete with private enterprises, and they say so in the literature they issue. The ardent champions of the League of Nations may believe that every school child should shout its purposes. The school may entertain different viewpoints on the subject. They may hold that the scope and function of the school precludes many subjects which must be left to the judgment of an adult population.

It can reasonably be assumed that the great body of boards of education throughout the United States is entirely clear as to the inclusion or exclusion of controversial subjects, and that the sensational warnings and sound of the alarm on the negative side of the controversialists is neither timely or in good taste. The school authorities do not need the caution. Their judgment enables them to determine for themselves upon matters lying within their province.

The Schoolmaster and Freedom of Speech

THE American people take exceptional pride in the fact that one of the great prerogatives of citizenship under the stars and stripes is that of free speech. They deem it an inherent right to express their views freely on all problems and phases of life. Thus, from the oratorical statesman down to the lowly soap-box spouter, one hears a great variety of discussions designed to save mankind from present and impending evils.

The American schoolmaster is counted among the leaders of public thought and among the platform orators of the day, and his contributions in the way of public expression, aside from his professional labors, constitute an important factor in the intellectual life of the nation. As a platform orator and after-dinner speaker he has been in growing demand. No list of Rotary, Kiwanis, Lions, or commercial organization speakers is complete without the name of superintendent of schools, the high-school principal, or the college president.

But we are here concerned with the modern conception of free speech and the extent to which the American schoolmaster may engage in that privilege. The experience of recent years has demonstrated that the educator cannot become a free lance on public questions and at the same time hold his place in the profession. The moment he travels in controversial seas he encounters the shoals and rocks of opposition.

Thus we occasionally find a schoolmaster slated for dismissal because he has offended the proprieties of his office. During the year a normal-school instructor lost his position because he had engaged in partisan political speeches, and an educator was eliminated from a large city school system because he espoused Russian sovietism too freely. Others have got into trouble because they entered the domain of controversial questions, ventured indiscreet newspaper interviews, mixed into local squabbles, and met with the rebuke of a reprimand or an outright dismissal.

When troubles of this kind arise, someone is certain to come to the defense of the victim of disciplinary action. The slogan of American free speech is loudly and eloquently sounded. A sacred tradition has been violated. Public sentiment has been outraged.

The fact, nevertheless remains that American free speech like everything else has its limitations. These limitations are generally recognized. It is only the impulsive and indiscreet that go beyond the bounds of propriety and fitness. Educators are not paid out of the public treasury to espouse strange doctrines or to teach new cults. They are brought into service to perform definite functions and tasks, all of which are within accepted lines. He who violates the conventions and conceptions of his time must accept the consequences. The most fiery plea in behalf of free speech will not change the issue. There is, after all, a clear-cut line between the proper and improper use of free speech.

School Bonds Versus Pay-As-You-Go Plan

NO phase of school finance has in recent years received more careful analysis than that which deals with the pay-as-you-go plan as against the deferred payment or bond-issue plan. The idea of obviating interest charges, which, in turn, may roll into figures somewhere near the original debt has its attractive features. Sound financial housekeeping which contemplates the wisdom of capital

outlay also weighs and measures the interest charges of a deferred-payment plan. These may in time become a troublesome burden.

Granting that all schoolhouse projects should be engaged in upon a cash basis, the approach to this subject is at once confronted with considerations of a practical nature. The first question that arises is whether the tax ability of the community can bear the burden of an immediate cash payment for a substantial schoolhouse project. Then, too, arises the question whether it is entirely fair to place a burden upon one generation, the benefits of which will extend to the next. Or putting the question in another way, ought not every generation pay for the advantages that it enjoys without relying too much upon inheritance and bequest factors?

The pay-as-you-go plan, in its modified form, contemplates the complete payment of a structure before the next is needed. This means to hold the obligation at a minimum, and not to engage in a new project until the old has been paid for.

In weighing the economies involved in a cash-payment procedure, the attention is fixed upon the mounting interest charges which accrue under the deferred-payment plan. But right here arises another consideration which, apparently, no one has as yet successfully cleared up. It relates to the earning power of money while in the hands of the taxpayer as against money invested in bonds.

To illustrate: The business man may say that public obligations are usually carried at a low interest rate. The capital he employs in his enterprise makes an earning exceeding by far that interest rate. Query: Is it good economy to divert the taxpayer's money into the tax treasury, or to let it continue to do service in his business?

The answer may be that the taxpayer must eventually meet his public obligation just the same. The use of money must be paid for whether it is in the hands of the private individual or reflected in a public debt. If the business man can earn 10 per cent on his working capital and the government can earn but 5 per cent, the former has an argument in favor of the deferred-payment plan.

The acceptance of the pay-as-you-go plan hinges finally upon immediate conditions and practical considerations. The needs of popular education are primary and controlling. If a schoolhouse is needed, and the tax ability of the community does not permit an immediate cash outlay, a bond issue must come to the rescue. If the tax ability of the school unit permits, and public sentiment is favorable, the cash-payment plan may well be accepted.

In conclusion it should be said that while the merits of the pay-as-you-go plan have come into recognition, the deferred-payment plan cannot, on the whole, either be discarded or condemned. The latter plan has its advantages, at least as an expediency measure, and as such will continue to serve. It will require some rather exhaustive research studies in order to establish finally and conclusively the relative merits of the two methods of financing capital assets in the school field. And even after these are established, local conditions and the tax ability of the community must decide the expediency of the one or the other plan.

Premature Information on School-Site Selection

SCHOOL authorities have learned that a premature announcement on the need of a school site in any given locality is likely to become costly. The enterprising real estate operator is certain to advance prices where it develops that a given site is wanted for a new school building.

The board of education of New York City was seriously embarrassed recently when it was discovered that employees of the school system were giving out advance information on proposed purchases of school sites. Public investigation revealed that real estate men availed themselves of inside tips by buying certain sites and selling them to the school system at a handsome profit. Other cities have had similar experiences.

Troubles of this nature not only bring into question the loyalty of the school personnel, supposed to stand in confidential relationship to the authorities, but also brings to the fore the wisdom of executive board-of-education sessions.

The public press, when excluded from such sessions, usually kicks up a considerable fuss. It holds that the public has the right to know what is going on, and that, since the press represents the public, it must

have access to inside information dealing with everything that concerns the interests of the schools.

The thoughtful and efficient board of education is not readily stampeded from what it deems a proper procedure in the acquirement of school sites. The cry of "star chamber sessions" and "secret meetings behind closed doors" does not deter the fearless school official from his task with a due regard of the exigencies that attend that task.

The business of school administration is subject to many of the considerations which obtain in private enterprise. Some things cannot safely be heralded to the world until they are an accomplished fact. Among these are the selection and purchase of school sites. The school authorities are supposed to pay a proper price for all they buy, but they are also supposed to protect the public against extortion and unfair practices.

Exacting Certified Checks with School Bids

THERE is a practice throughout the country on the part of school authorities in accepting competitive bids on school supplies and equipment requiring the same to be accompanied by certified checks. These checks are exacted in the nature of a guaranty of good faith, and an assurance of the faithful performance of contract.

The practice entails some considerations which deserve the attention of the contracting school authorities. A board of education has invited a number of bidders and in each instance has exacted the deposit of substantial check. The award of contract has been postponed, but the several checks are held. Sometimes there are several postponements and several months delay. A manufacturer reports that a check deposited last February had not been released in June.

On the other hand, the manufacturer or distributor who is called upon to submit bids and accompany them with certified checks is likely to strain his bank credit in order to meet the demands made upon him. The money he raises at the bank is rolling up interest charges which must be met.

At this point it may be well to ask whether the practice of exacting certified checks with competitive bids has any particular merit, or is at all necessary in order that the school interests may be protected. Many boards of education have long come to the conclusion that the practice is unreasonable as well as unnecessary. They do not exact certified checks any more than would a commercial house or an industrial concern that is buying in a competitive market all the year round.

A reputable manufacturer or distributor of school supplies and equipment could not remain in business very long if his dealings were of a questionable character. And no concern should be invited to submit a contract unless its character and standing is known.

Thus many of the large cities throughout the country, whose annual purchases run into large figures, exact no guaranty of any kind, or if they do the amount is nominal only. The city of Baltimore requires a \$50 deposit regardless of the amount involved in the bid.

The tendency is to do away with all certified checks and where any guaranty is at all exacted to resort to a bond, covering, say 15 per cent of the amount involved in a prospective contract. A progressive board of education is not inclined to exact unreasonable conditions in making its purchases. It wants to be on the safe side and adhere to practices that are generally accepted by the business world.

To emphasize play as the exclusive mode of activity in education, and to discard work as a desirable form of educational activity, is to disregard certain facts in the mental development of the child and to overlook certain findings in the modern study of personality. Play is relatively irresponsible activity, while work is an activity which grows out of a definite sense of responsibility to the community. Play is personal, self-expressive, and without ulterior purpose. Work is for the purpose of accomplishing some object outside of the individual and involves subordination of one's self to the accomplishment of this purpose. — F. N. Freeman.

School Interest Rates Rise¹

Harold F. Clark, Ph. D., New York

Interest rates on school bonds rose during the month of July. June registered a very slight increase. This upward movement of interest rates became more pronounced during July. The net interest on all school bonds sold during the month of July was 4.17 per cent. This compares with a net interest rate of 4.06 per cent during the month of June. The low point of the current movement and for that matter, of the entire post-war period, was the month of May—the net interest rate of the bonds sold during that month reaching the very low figure of 4.05 per cent.

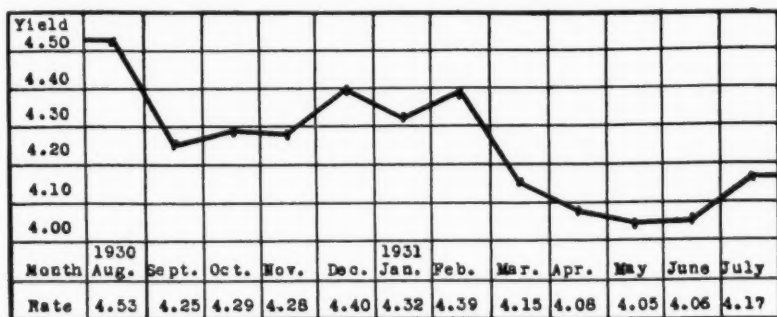


TABLE I. AVERAGE PRICE OF ALL SCHOOL BONDS SOLD DURING THE MONTH

This reversal in interest rate, even though it has continued for two months, does not necessarily represent the final low point of the present movement. In fact, there is every reason to expect school-bond interest rates to recede to the May level and perhaps to go somewhat lower. Most of the basic conditions are satisfactory for sustained strength in the school-bond market. There are enormous sums of money waiting to be invested and a high degree of safety seems to be the first question asked. No upward or downward movement in interest rates is likely to be uninterrupted for a long period. There was a variety of factors causing this temporary increase in interest rates. Perhaps the most important of these factors has been the temporary unsettling of the general economic and industrial situation because of conditions in Germany. Many foreign bonds were carried to very low levels. Other bonds reacted more or less the same in many cases. This was especially true of the second- and third-grade issues.

TABLE II. Amount and Yield of Bond Issues

1. School bonds during the month ¹ of July.....	\$ 8,075,000
2. All municipal securities sold during the year (to date).....	940,000,000
3. All school bonds outstanding (estimated).....	2,269,000,000
4. Average yield of all school bonds outstanding (estimated).....	4.61%
5. Yield of school bonds of ten large cities.....	4.07%
6. Yield of United States long-term bonds.....	3.10%

¹The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

If confidence is restored in the international situation and the present surplus of money remains at home, there is every reason to think that school-bond interest rates will resume their downward trend. At the present time there is substantial variation from week to week in school-bond interest rates. Even though the index has risen slightly, there is no reason why a school board should hesitate to sell bonds if it watches the particular day and week it is going to sell. The index has actually fallen below 4 per cent on many occasions, even though no monthly average has reached this low level. We still think it is highly probable that school bonds may actually stay below a 4-per-cent level for an entire month unless there are some drastic changes in the general business or financial situation.

The extreme ease of money rates and the almost unbelievable surplus of money is shown

¹Copyright by Harold F. Clark.

by the rates of short-term Treasury certificates of the Federal Government. Last month we commented on the amazing rate of $\frac{5}{8}$ of 1 per cent which the Treasury paid for certain short-term loans. And even a more unbelievable thing occurred when the Federal Government during the past month actually borrowed money for less than $\frac{1}{2}$ of 1 per cent per annum. This astounding event occurred when the Federal Government sold 90-day bills at a discount basis of approximately .49 per cent. A careful check has not been made but it is highly probable that this is the lowest rate that the Federal Government

has ever borrowed money. It is almost certainly the lowest rate ever paid by any borrower in the United States at any time. And it is quite within the range of possibility that it is the lowest rate on record in the entire financial history of the world. As long as this situation continues, school-bond interest rates are not going to rise to a very great extent.

TABLE III. Bond Sales and Rates¹

Year	School	Municipal	All Public and Private	Year	Municipal
1929	230*	1,431	10,194*	1929	4.67*
1928	218	1,414	8,050	1928	4.45
1927	266	1,509	7,776	1927	4.49
1926	260	1,365	6,344	1926	4.61
1925	323	1,399	6,223	1925	4.58
1924	288	1,398	5,593	1924	4.26
1923	206	1,063	4,303	1923	4.303
1922	237	1,101	4,313	1922	4.81
1921	215	1,208	3,576	1921	5.18
1920	130	683	3,634	1920	5.12
1919	103	691	3,588	1919	5.04
1918	41	296	14,368	1918	4.90
1917	60	451	9,984	1917	4.58
1916	70	457	5,032	1916	4.18
1915	81	498	5,275	1915	4.58
1914	42	320	2,400	1914	4.38

¹By special permission based upon sales reported by the Commercial and Financial Chronicle.

*Not final.

As far as school bonds are concerned, July did not see any of the exceedingly low records of June duplicated. It is quite true that in July there were any number of issues sold below 4 per cent and a few sold as low as $3\frac{1}{2}$ per cent. These rates are fairly satisfactory for any school district, but the amazing rate of 3.30 per cent established in June still stands as the low point. July, on the other hand, did furnish one event to cause contemplation. One school district actually sold a 6-per-cent bond at a price of approximately 90. For the length of time this bond runs, it works out a net interest rate of almost 8 per cent. Obviously, the district was in a desperate financial condition or no such rate would have been paid. But even then, it remains an open question as to whether the bonds were sold to the best advantage. Such rates in 1931 bear far more resemblance to gambling than they do to legitimate financial operations. If such rates have to be paid in the light of all the facts, such a school situation probably demands drastic remaking from the ground up—perhaps even abandoning the school district. It would certainly seem as though the state should review all such cases of unwarranted interest rates. It might not be an unwise policy for the state to step in and say wherever a rate higher than a 50-per-cent increase on the school-bond index has to be paid, that permission must be obtained

from the state. The strong probabilities are that a situation which necessitates an 8-per-cent interest rate today needs more drastic attention than additional borrowed money.

The total of school bonds has receded sharply, the issues for the entire month of June being only about half what they were for the month previous. The same holds true for the total of all municipal issues. The grand total of all municipal issues for the first seven months of the year, however, tells a different story. A total of municipal bonds of almost one billion dollars has been sold during the seven months. With the single exception of 1924, this is easily the largest total on record. Just as the total of all municipal issues has approached a new record, the total of all security issues has declined very shortly. The same factors which led to the great expansion of corporate security issues in 1928–29 have brought about a great reduction of such issues in 1931. The total of all kinds of issues, both corporate and public, are only about half what they were for 1930 and not even one third of what they were in 1929. High interest rates in 1928–29 limited the amount of public financing. But the high rates did not deter the issuing of large amounts of corporate stocks and bonds.

TABLE IV. Average Yield of Long-Term Federal Government Bonds¹

Month	Rate	Year	Rate %
Aug.	3.27*	1930	3.397
July	3.28*	1929	3.644
June	3.30	1928	3.437
May	3.31	1927	3.464
April	3.38	1926	3.544
Mar.	3.39	1925	3.797
Feb.	3.40	1924	4.010
Jan.	3.33	1923	4.298
1930		1922	4.301
Dec.	3.34		
Nov.	3.32		
Oct.	3.34		
Sept.	3.37		

¹Taken from Federal Reserve Bulletin.

*Not final.

Table IV shows the decline in interest rates of long-term Federal Government bonds. Although the rates seem to decline only slightly, there is a definite tendency toward lower rates even as reported by the Federal Reserve Board.

TABLE V. Security Prices and Yields¹

Date	Average Price of 404 Stocks (1926 Average=100)	Average of 60 Bonds	Average Yield of 60 High-Grade Bonds
1931			
Aug.	94.3*	90.6*	4.43*
July	98.2*	90.4*	4.45*
June	95.1	90.4	4.45
May	98.0	90.7	4.43
Feb.	119.8	90.4	4.44
Jan.	112.3	99.6	4.43
1930			
Dec.	109.4	97.8	4.55
Nov.	116.7	99.1	4.46
Oct.	127.6	100.0	4.41
Sept.	148.8	100.0	4.41

¹As reported by Standard Statistics Company, Inc. Used by special permission.

*Not final.

Table V shows that the prices of general securities has not reversed its direction. Prices are at or near their low point for the past few years. Bonds, on the other hand, are fairly near recent high points and would be even nearer were it not for weakness in certain particular types of bonds, such as railroads.

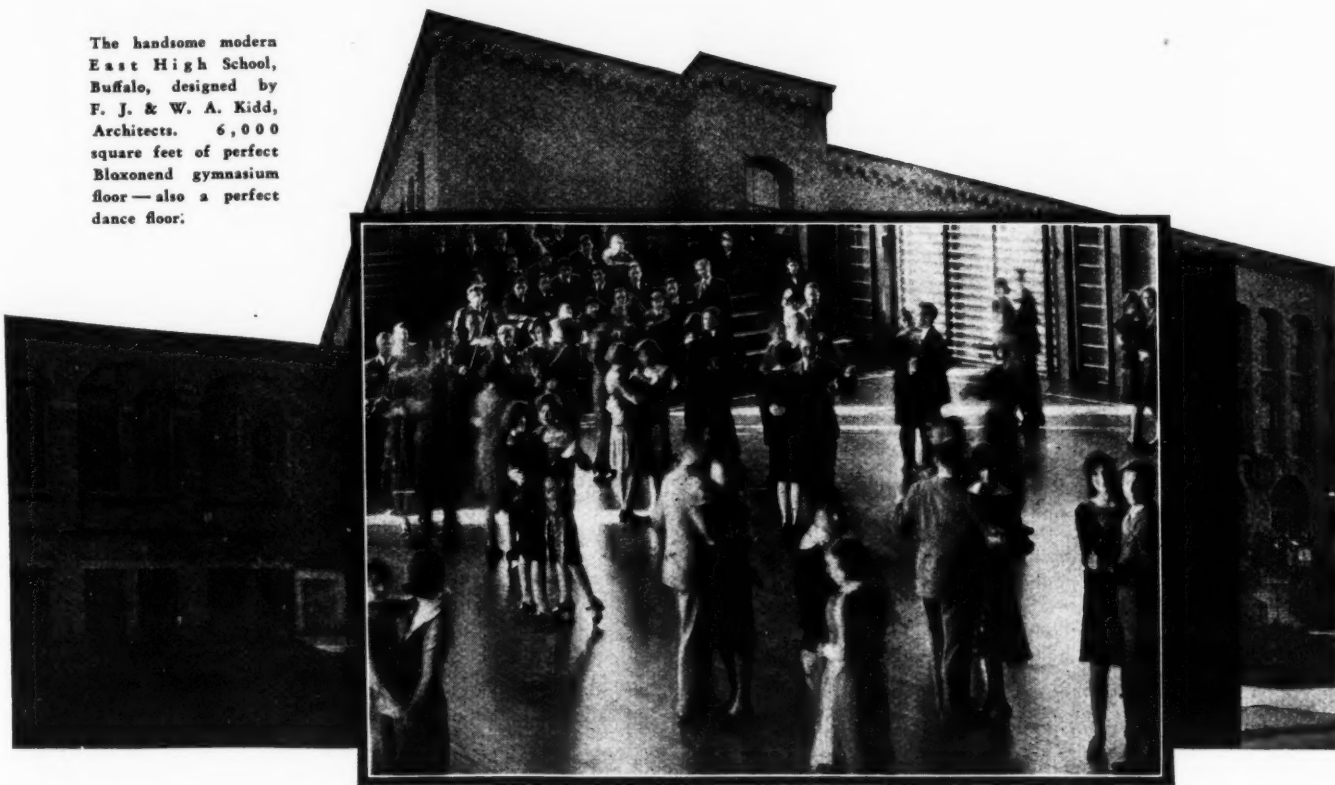
TABLE VI. Revised Index Number of Wholesale Price (United States Bureau of Labor Statistics, 1926=100)

Month	All Commodities	Building Materials	Year	All Commodities	Building Materials
1931			1930	86.3	90.3
Aug.	69.7*	76.9*	1929	96.5	104.0
July	69.8*	77.8*	1928	97.7	93.7
June	70.0	77.5	1927	95.4	93.3
May	71.3	78.4*	1926	100.0	100.0
Apr.	73.3	80.9	1925	103.5	101.7
Mar.	74.5	81.9	1924	98.1	102.3
Feb.	75.5	81.8			
Jan.	77.0	82.9			
1930					
Dec.	78.4	84.4			
Nov.	80.4	85.6			
Oct.	82.6	85.8			
Sept.	84.2	86.4			

*Not final.

Table VI registers still another sharp decline in commodity prices. This holds true for all commodities and for buildings as well. As long as this decline continues it is fairly safe to assume there will be no great increase in the demand of money for business so that it would greatly limit the available funds being invested in school bonds.

The handsome modern East High School, Buffalo, designed by F. J. & W. A. Kidd, Architects. 6,000 square feet of perfect Bloxonend gymnasium floor—also a perfect dance floor.



Fine for Dancing too—

*slipperiness easily obtained
... and quickly removed*

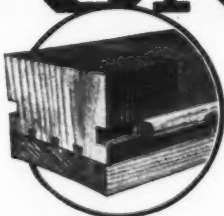
Dancing, calisthenics, basketball and other rough usage leave unmarred the permanently smooth surface of BLOXONEND Flooring. It is fast . . . it gives perfect foot traction in all directions . . . It is absolutely splinter-less . . . it stays smooth. An exclusive and unique method of laying insures utmost resilience—no rigid cementing to underfloor.

The end grain fibres form the surface of BLOXONEND. It is durable, handsome and easy to keep clean. Temporary slipperiness for dancing is obtainable without sacrificing its permanent non-slip feature. Leading architects recognize these valuable qualities and specify BLOXONEND for the better schools everywhere . . . for gymnasia, shops, cafeterias and auditoriums. A Booklet with details and illustrations will be sent promptly on request.

CARTER BLOXONEND FLOORING COMPANY

Kansas City, Missouri. Offices in Leading Cities.

**BLOX-ON-END
FLOORING**



Bloxonend is made of Southern Pine with the end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards.

Lays Smooth

Stays Smooth

Meeting the Triple Requirements — Safety, Durability, Appearance

IT is actually possible to meet all three important requirements with Alundum Aggregate Treads (precast or poured plastic). They have a flat, unbroken surface but one that is *positively* and *permanently* non-slip. And in addition to safety the Aggregate gives exceptional resistance to wear—because of the hardness and toughness of Alundum abrasive. The many colors of the Aggregate and the marble chips make possible an unlimited number of attractive effects.

NORTON COMPANY, WORCESTER, MASS.

T-290

**NORTON
FLOORS**
Alundum Tiles Treads & Aggregates

Washington Correspondence

A. C. Monahan, Formerly U. S. Bureau of Education

Pennsylvania Ten-Year Program in Public Education

A ten-year program in public education for the State of Pennsylvania is being formulated by the state department of education, under the leadership of Dr. James N. Rule, state superintendent of public instruction. Worth-while results may be expected, as Dr. Rule has had many years of experience in schoolwork in Pennsylvania and elsewhere, having served for several years as deputy state superintendent in charge of relations with the teachers colleges, the high schools, and the certification of teachers.

The work will be done under the direction of a committee to be known as the "Commission for the Study of Educational Problems of Pennsylvania," of which Dr. Rule is the director. Dr. Walter S. Deffenbaugh, of the United States Office of Education, is associate director. Dr. Deffenbaugh, in addition to his wide knowledge of schoolwork from his national experience in the federal bureau, has had many years in schoolwork in Pennsylvania before going to the governmental position, which makes him peculiarly fitted for the Pennsylvania survey of public education. These two men, together with four others, constitute the executive committee. The others are F. B. Haas, president, Bloomsburg State Teachers College; A. L. Rowland, superintendent, Cheltenham Township schools; W. G. Chambers, dean of education, Pennsylvania State College; and Ben Graham, superintendent of schools, Pittsburgh, Pa.

Four committees have been appointed. Dr. John Minnick, chairman of the "Committee on Guiding Principles," is dean of the school of education, of the University of Pennsylvania; Dr. J. L. Eisenberg, president, Slippery Rock State Teachers College, is chairman of a "Committee on Unit of School Organization and Administration"; Dr. Leroy King, of the University of Pennsylvania, is

chairman of the "Committee on School Finance"; and Mr. Haas is chairman of the "Committee on Recodification of School Law."

Dr. Rule has adopted a plan of keeping the school superintendents and others in the state informed on the work and progress of the commission through a series of letters issued from time to time addressed to them. In these letters he has invited the help and suggestions of the schoolmen and women of the state, promising that every suggestion will be given serious consideration by the proper committee. In this way every schoolman in the state will have a part in the survey and the formulation of the proposed ten-year plan.

Relative Salaries in Rural and City Schools

W. H. Gaumnitz, specialist in rural education of the U. S. Office of Education, is making an interesting study of teachers' salaries in elementary schools of different types, rural and urban, according to the sizes of the schools. He finds from data already tabulated from a large percentage of schools, that the median salary paid in the one-teacher rural schools of the entire country is \$788, which includes all from which data were obtained regardless of location, or of whether for white or colored children. In two-teacher rural schools, the median salary is greater than in the one-teacher school by \$41; in three-teacher schools, by \$192; in consolidated rural schools, by \$249; and in rural village schools with three or more teachers, by \$369.

In city schools the salaries are greater. In cities with populations of from 2,500 to 5,000, the elementary-school salaries are greater than in one-teacher rural schools by \$374; in 5,000 to 10,000 cities, by \$515; in 10,000 to 30,000 cities, by \$640; in 30,000 to 100,000 cities, by \$821, and in all larger cities by \$1,330. The median city salary is greater by \$777 than the median rural-school salary, all sizes of schools included.

Indian Educational Service

Four recent appointments to the Indian Educational Service in administrative positions will be of interest to schoolmen. Carl H. Skinner, who has just received a doctorate from Leland Stanford University, has been appointed superintendent of

the Indian School at Phoenix, Arizona. He is a graduate of the State Teachers College, Emporia, Kansas, has a master's degree from the University of Indiana, and has had twelve years of experience in public-school work as a teacher, principal, and superintendent, in Kansas and Nebraska. For two years he was the director of the training school at State Teachers College, Kearney, Nebraska.

Dr. Joe Jennings, who has been appointed superintendent of education for the Blue Ridge Reservation, South Dakota, will have under his oversight 26 day schools and one boarding school. He is a graduate of the University of Tennessee with a doctor's degree from Peabody, and has had 18 years in schoolwork, including several in the Tennessee Department of Education, and as director of research for the Nashville school system.

Mr. R. M. Tisinger, a graduate of the Virginia Polytechnic Institute, has become superintendent of education for the Pima and Papago Reservations in Arizona. He has had experience in schoolwork in Virginia, and is a graduate student at Cornell University.

Mr. J. A. Anderson, who assumes the superintendency of the Turtle Mountain-Fort Totten Reservation in North Dakota, has been in schoolwork in Minnesota as an instructor and superintendent. He is a graduate of a Minnesota college with a master's degree from Teachers College, Columbia University, and a doctorate from the University of Minnesota.

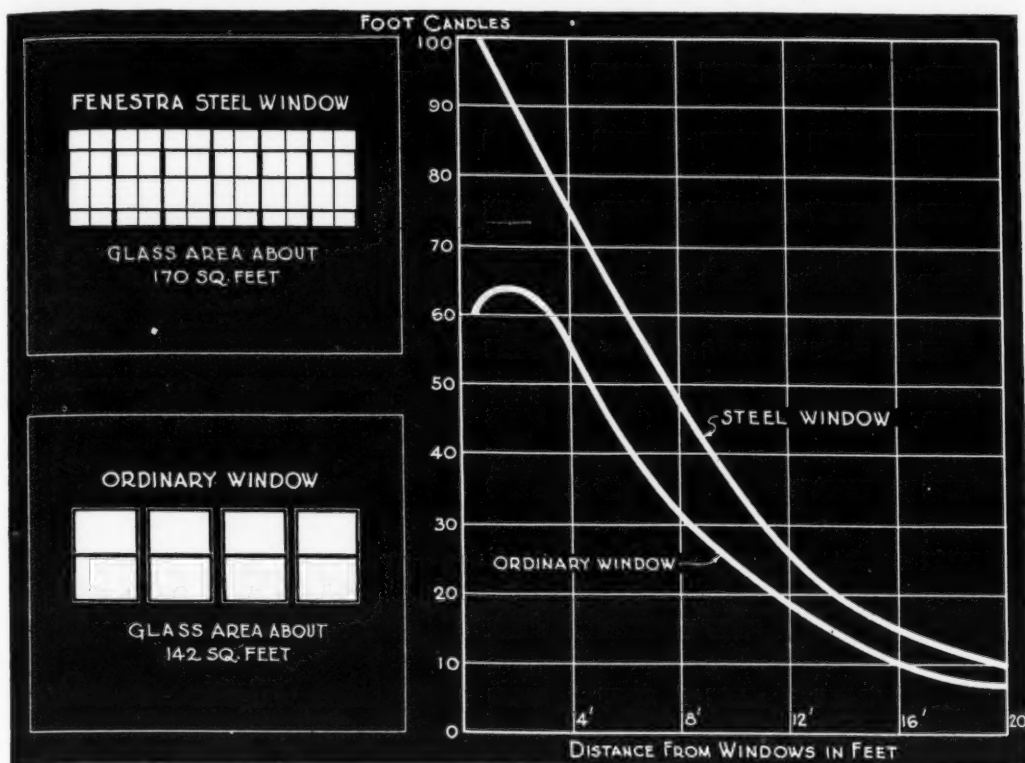
Higher Education in the United States

Figures of the U. S. Office of Education show that there are now 1,076 colleges and junior colleges in the United States, with 67,209 instructors and 868,793 students in college work. This is an increase of 406 institutions since 1920, with twice as many students as in that year. As nearly 40 per cent of these students are in public institutions receiving all or part of their education at public expense, it is a matter of vital interest to all school authorities.

The larger percentage of increase has been, in this past decade, in the number of junior colleges, the increase being from 52 in 1920, to 248 in 1928. The publicly owned and controlled junior colleges

(Concluded on Page 68)

WHAT EVERY SCHOOL MAN SHOULD KNOW ABOUT DAYLIGHTING



WINDOW AREA FLOOR AREA

How to get them in proper relation

To secure adequate daylighting, many state codes require that "the window area in a school room shall not be less than 25% of the floor area." Authorities recommend a minimum light value of 10 foot candles on any desk.

In the room of conventional size — 29' long by 24' wide by 11' 3" high — the largest combination of ordinary windows will provide a net maximum glass area of approximately 18% of the floor area, affording only about 6½ foot candles of daylight 20' away from the window under overcast sky conditions.

In contrast, under the same sky conditions a combination of Fenestra Steel Windows of the same over-all dimensions will provide a net glass area of 25%, and afford a daylighting value of 10 foot candles 20' distant.

Besides affording scientifically correct schoolroom daylighting Fenestra Steel Windows offer such modern advantages as:

1. Maximum ventilation—up to 100% if desired.
2. Built-in Windguards at the sill — fresh air ventilation without direct drafts.
3. Maintenance Economy—every outside inch of glass quickly washed from within the room.
4. Glass Replacement Economy—inexpensive replacement of small glass lights when broken.
5. Silent, finger-touch operation — non-warping steel construction with bronze hinge bearings.
6. Firesafety—muntins and frames are solid, rolled steel sections.
7. Beauty—slender lines and fine hardware appointments.
8. Extraordinary weathertightness — demonstrated by University of Michigan tests.
9. Erection Service—by the famous Fenestra Construction Company, assuring complete satisfaction.

DETROIT STEEL PRODUCTS COMPANY
2282 East Grand Boulevard, Detroit, Mich. *Factories: Detroit, Mich., and Oakland, Calif.*

Fenestra



Institute of Biology, Harvard University,
Cambridge, Mass.
Architects: Coolidge, Shepley, Bulfinch &
Abbott, Boston.



N. C. State College of Agriculture and Eng.
Thompson Memorial Gym, Raleigh, N. C.
Architect: Hobart B. Upjohn, New York City.



Fordson High School, Dearborn, Mich.
Architect: H. J. Keough.



University of Arizona — School of Mines and
Engineering, Tucson, Ariz.
Architect: John B. Lyman, Jr.



Joseph E. Brown Jr. High School, Atlanta, Ga.
Architect: Pringle & Smith.



West Jr. High School, Binghamton, N. Y.
Architect: A. T. Lacey & Son



Michigan State College — Home Economics
Building, Lansing, Mich.
Architect: E. A. Bowd.



Christopher Columbus School,
Binghamton, N. Y.
Architect: Tiffany & Kaley.

Windows for
Scientific
School Room
Daylighting

INSURE
for
SAFETY and
PERMANENCY

with

FERALUN
Anti-Slip Treads

They make the stairs safe.

American Abrasive Metals Company

50 Church Street Representative in all principal cities. New York, N. Y.

PROTECT the CHILDREN

Give them safe stairways

You owe it to the children of your school to see that the stairways which they use constantly for 9 or 10 months of every year are in perfect condition. Flying little feet never take worn stairs into consideration, and children are often maimed for life as a result of a fall down stairs. You can eliminate 9/10 of this danger by installing FERALUN Anti-Slip Treads on your stairs TODAY. They will outlast the school building and provide sure footing at all times.

(Concluded from Page 66)

made up a large part of the increase. In 1920, of the junior colleges, 19 per cent were public institutions, but in 1928 the percentage had increased to 46. Many of these new junior colleges were established by various cities and are under the administration of their boards of education. It means a wider field of responsibilities for the city board of education.

Another School-Board Difficulty

Ten or twelve new school buildings in the District of Columbia will open in September without school furniture, unless the present dispute between the district authorities and the controller of the U. S. Treasury is adjusted. The contractor who was awarded the job of furnishing 21,000 pieces of school seating and other furniture has stopped work on the contract. The contract was awarded this particular company because it was the lowest bidder complying with the complete specifications. Two other companies bid lower prices but did not submit samples as called for in the specification. The district commissioner threw out the bids for failure to submit samples. The controller has ruled that the job should have been awarded the lowest bidder regardless of whether he furnished samples or not. The award was made by the commissioners on the recommendation of the school authorities.

School authorities have challenged the right of the controller of the Treasury to check contracts. They cite a provision in the Budget Act of 1921, which states that the controller-general shall "report to Congress every contract made by any department or establishment in any year in violation of the law." That, they claim, is the extent of the controller's power. They point out also that the General Supply Committee of the Treasury Department, which awards contracts for the greater part of all materials and supplies purchased by the Government for all departments and offices, requires samples and awards contracts on that basis.

The company holding the contract signed by the District Commissioners, has purchased materials used in the construction of the furniture and has done considerable work in the actual manufacturing. If the controller-general in his final decision holds to his present views, the company will prob-

ably get out an injunction against another contract being signed and throw the matter into the courts for a decision, which means that the schools will have to wait a long time for new furniture. The business manager states the schools will be opened if "we have to use soap boxes and bridge tables."

National Association of Teachers in Colored Schools

The annual meeting of the National Association of Teachers in Colored Schools was held in Washington, D. C., with 1,000 in attendance. A letter from the President was read, and an address was given by Commissioner of Education, Dr. William John Cooper. Other speakers were Dantes Bellegarde, representative of the Haiti Government, President John W. Davis, of the West Virginia State College, and Dr. Ambrose Caliver, specialist in Negro education of the U. S. Office of Education.

Fannie C. Williams, New Orleans, president of the association, who presided at the general meetings made the presidential address, speaking on the work of the U. S. Office of Education for the colored schools and particularly the educational survey being made under the direction of Dr. Caliver.

Officers for the following year are: President, H. C. Trenholm, president of Alabama State College at Montgomery; regional vice-presidents, A. M. P. Strong, Arkansas; L. F. Palmer, Virginia; W. H. Fouse, Kentucky; L. P. Hill, Pennsylvania; W. E. Day, Oklahoma, treasurer, W. D. Miller, West Virginia; executive secretary, W. W. Saunders.

Summer Activities of the U. S. Commissioner of Education

During the summer months, in addition to the details of the conduct of the Office at Washington, the U. S. Commissioner of Education, Dr. William John Cooper, took the opportunity of meeting a large number of teachers attending summer schools in various parts of the United States and others attending educational conferences. He gave addresses at five Illinois State Teachers Colleges, at the Colorado State Teachers College at Greeley, and at three other institutions of higher education in the state, at the New Mexico Normal University,

Las Vegas, the Kansas City Teachers College, Marshall College, Huntington, W. Va., and the University of New Hampshire.

Inspection of Alaska Schools

Mrs. Katherine Cook, chief of the division of special problems of the U. S. Office of Education, has just returned from several months' absence from Washington during which she visited the schools of Alaska making special investigations for the office. In this work she visited schools of all types and in all parts of the territory, traveling over 2,000 miles by airplane to reach those in inaccessible places. Mrs. Cook is helping the Alaska Department of Education solve its special problems relative to curriculum needs under the peculiar conditions in the territory, and also to discover the best means of preparing teachers for its schools. A new plan of certification of teachers will probably result.

From Alaska, Mrs. Cook journeyed to Mexico to attend a special educational conference to which all Mexican states sent representatives, after which she visited schools in various parts of Mexico.

♦ Pontiac, Mich. The school-tax rate for 1932 has been fixed at \$13.60 per thousand, which is a reduction of \$1.64 from the previous year.

♦ Dayton, Ohio. The board of education has approved its 1932 budget, calling for a total of \$4,542,389 for the operation of all departments, as compared with a request for \$4,502,667 for the year 1931. The budget represents a total of \$39,722 more than was asked last year. Of the total budget, the largest item, \$2,792,239 is for operating the superintendent's department, which includes the salaries of principals, supervisors, and teachers.

♦ River Rouge, Mich. The school board has reduced its budget by \$44,000 to meet the demand for lower school costs in 1931-32. Of the amount, \$35,000 was cut from the payroll of the teaching staff by the elimination of nine teachers and a graduated cut of from 6 to 16 per cent in salaries of teachers. Janitors and engineers in the schools were given a month's vacation during the summer without pay.

ABOVE THE TIMBER LINE ..OR IN THE CORK-QUIETED SCHOOL ...



This classroom at the Park Hill Grade School, Denver, Colorado, has been quieted with Armstrong's Corkoustic. Architects, Mountjoy & Frewen, Denver.

Where
the lash of NOISE may never reach

PERHAPS you, too, have climbed beyond the timber line . . . up where noise never reaches to destroy the mountain's silence. If only you could have brought back that silence! How easily would school work become more pleasant and efficient.

But there is another way—a practical way. Armstrong's Corkoustic will protect your school from the lash of noise. Applied to walls and ceilings these panels of

pure cork absorb the sounds that whip through corridors and rooms.

Decoratively, too, the rich brown panels give the school interior an atmosphere of quiet. The natural cork blends well with any decoration scheme. Colors and designs, if desired, are easily obtained with cold-water paints.

Our book "Armstrong's Corkoustic," will be sent to Armstrong's you free on request. Address the Armstrong Product

Cork & Insulation Company, 954 Concord Street, Lancaster, Pa.

To eliminate noise and absorb vibration of moving machinery, we suggest the use of Armstrong's Vibracork. Fans and motors of the ventilating system, pumps, printing presses, and other types of equipment can be effectively silenced by resilient cork. And machines last longer when vibration is checked. All the advantages of cork-cushioning can be secured at very moderate cost. Write for our pamphlet describing the practical applications of Armstrong's Vibracork.

Armstrong's CORKOUSTIC

THE MODERN ACOUSTICAL INSULATING TREATMENT



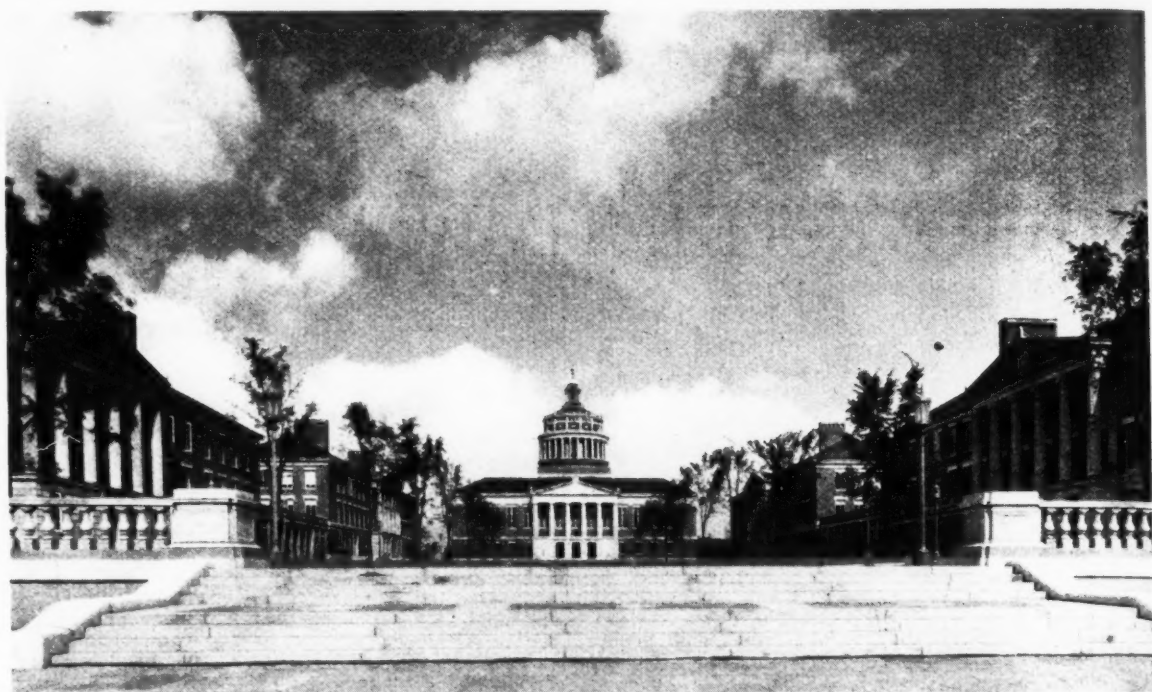
BEAUTY UTILITY AND ECONOMY . .

High Quality glass in adequate surfaces actually effects economy in school and university buildings. Light and sunshine are necessary for the comfort and utility of this type of building. Glass

which will retain its clarity and brilliance of finish provides a constant means of admitting light and therefore is effective as an economic measure.

Libbey-Owens-Ford Glass—because of its lasting beauty of appearance—greatly enhances the atmosphere of campus and quadrangle.

Architects are aware of the important part glass plays in beauty and utility of design—and appreciate the lasting qualities of L.O.F. Glass.



UNIVERSITY OF ROCHESTER, ROCHESTER, N. Y.

Architects—Gordon & Kaebler, Rochester. General Contractors—A. W. Hopeman & Sons Co., Rochester.

Each sheet of Libbey-Owens-Ford "A" Quality Glass bears the distinctive L.O.F. label for the protection of the architect, builder and owner.

LIBBEY-OWENS-FORD GLASS COMPANY, TOLEDO, OHIO



Manufacturers of Highest Quality Flat Drawn Window Glass, Polished Plate Glass and Safety Glass; also distributors of Figured and Wire Glass manufactured by the Blue Ridge Glass Corporation of Kingsport, Tenn. . . . This label appears on each light of L.O.F. "A" Quality Glass. Printed blue for double strength and red for single strength.

LIBBEY · OWENS · FORD QUALITY GLASS

CHICAGO CORRESPONDENCE

Although administered and quite largely financed by local districts, public schools are theoretically under the direction, supervision, and control of the state. In the case of the Chicago public schools the State of Illinois has practically never exercised its theoretical right of supervision. However, at the recent session of the general assembly which adjourned in June, the state senate appointed a special committee which held hearings in Chicago at which board of education members were quizzed regarding school costs. The senate committee frankly stated to the board members that opinion is widespread that the Chicago schools are operated extravagantly, and they felt it would be desirable to have a survey made of the school system before revenue relief, badly needed by the Chicago school system, would be obtainable from the legislature. The board of education agreed to such a survey, and, at the suggestion of the senate committee, selected the Cleveland Audit Company, a firm of certified public accountants. This firm carried on an investigation for three and one-half weeks and then made a report. This report was severely criticized by teachers, engineers, the mayor, and the board members. It was not supported by the senate committee. Among other things, the survey report recommended a number of retrenchments in the instructional department, such as suspension of automatic increases in the teacher salary schedules, at the same time admitting that the survey staff had not even investigated a large part of the business department, particularly building contracts. As a result of the criticism, the school board decided to have the entire school system, business, law, and educational departments, given a genuine survey. On recommendation of a group of civic leaders, professional educational experts are to supplement the audit investigation of the accountants with a comprehensive survey. The president of the school board has been corresponding with W. J. Cooper, United States Commissioner of Education, to see whether the United States Office of Education will not undertake the survey. It seems likely that this plan will materialize. It is likely that the impartial findings of a staff from the federal office of edu-

cation will be acceptable to citizens, to the teaching force, to the board of education, and to the state senate.

The governor of the state has also interested himself in the Chicago school situation. It seems inevitable that there must be a special session of the legislature called early this fall to straighten out not only revenues for the schools, but for all local tax-spending bodies. The governor must issue the call. Before doing so, he has stated that a workable plan must be agreed upon in advance by all factions. He named a "Governor's Commission" to represent him in working out some legislative program. On this commission are such well-known figures as Samuel Insull, Fred Sargent, Victor Olander. The commission has been holding hearings to which representatives of all the local tax-spending bodies have been summoned to testify. The commission members have declared that they will not work out a relief plan for anybody which does not make drastic retrenchments in its costs of operation. The commission members have been particularly severe toward certain board-of-education officials. Apparently spurred on by the criticisms of the governor's commission and also actuated by a sincere desire to economize, the board of education has voted a number of economies totaling a saving of \$2,311,000 during the next year. These savings come as a result of abolishing 122 positions in the education department, such as director of visual education, director of safety, supervisor of bathrooms, supervisor of exhibits, the elimination of a considerable number of minor clerical and administrative positions, the suspension of community centers, the closing of three schools—a reform school and two elementary schools with declining enrollments—and the reduction of the amounts of appropriations for certain budget items, for evening schools, for playgrounds, and so forth. Three positions in the law department were eliminated. Thirty-three positions in the business department were eliminated. Other savings in the business department were: reduction in amount of appropriations for fuel, gas, and electricity, deferring repairs on certain faulty buildings, deferring maintenance matters at certain schools, for example, painting, decorating, scraping and

shellacking desks, and other alterations. The school board had originally intended to have the entire personnel of teachers and civil service employees donate one week's service in September without pay. The school-board attorney ruled that the board could not legally compel this, and since some of the teachers and other employees objected, this proposed saving, a matter of \$1,200,000, was deferred for possible future action.

In Illinois, school districts are expected to operate the first part of the year, at least, on borrowed money. Taxes for any current year are not paid until about May 1. The law permits school boards to borrow money to run the schools by selling tax-anticipation warrants. Due to the reassessment of Cook county property values and the delay in payment of taxes, the Chicago board of education during the past two years has had to operate the schools for the entire year on the proceeds of tax-anticipation warrants. Six million dollars of current school revenues are being spent solely for payment of interest on these borrowings. Now, however, the board of education is unable to borrow on tax-anticipation warrants. The bankers are unwilling to loan the money, partly because of unsettled banking conditions, and partly because they want a reorganization of the assessing machinery as a prerequisite for further loans to local governmental bodies.

The school teachers have not been paid since April 24. In lieu of cash for their salaries, the board of education has issued participation-certificates, popularly called "scrip," which may be taken by teachers and disposed of wherever possible. Scrip is redeemable when the tax-anticipation warrants are sold, or, at the latest, out of the first revenues raised by the payment of the 1931 taxes in the summer of 1932. About \$6,000,000 of scrip was issued by the board in denominations of \$25 and up. A second issue of about \$4,000,000 has been authorized in denominations as low as \$10. Scrip will pay 6-per-cent interest from date of issuance to date of redemption. Most of the teachers are hard pressed and cannot afford to hold this scrip as an investment. The banks are unwilling to accept it. Many of the teachers and civil service

(Concluded on Page 73)

THIS is a typical classroom in the North Junior High School of Quincy, Massachusetts. The entire building is equipped with Holophane Planned Lighting, the classrooms being illuminated with Holophane Filterlites as illustrated here. The architects of the building were J. Irving Cooper Corporation, and the electrical engineers were James Wilkinson & Co., both of Boston.



Promote Good School Work with HOLOPHANE PLANNED LIGHTING

THIS schoolroom is equipped with Holophane Planned Lighting. There is plenty of horizontal light for easy reading and writing at the desks, and sufficient vertical illumination to make the blackboard and walls clearly visible from all parts of the room.

The light is so well diffused that there are no sharp patches of light, and no fixture shadows. Pupils may gaze directly at the Holophane Filterlites without discomfort, and resume work instantly, for the brightness of the lighting units is practically the same as that of the background walls and ceilings. The entire room is bathed in a soft, uniform light that promotes good

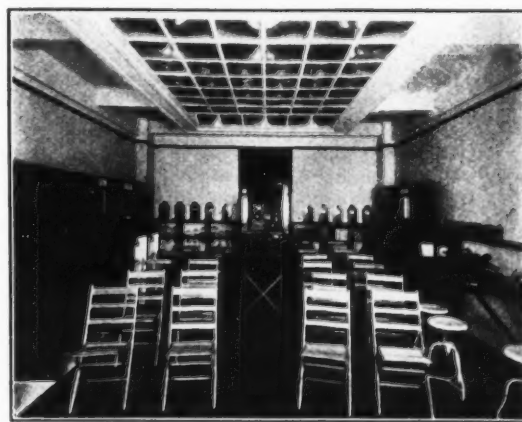
school work by making *seeing* easy.

The wide acceptance of Holophane Planned Lighting in leading schools and colleges proves that it is the preferred system wherever all the facts on lighting are brought to the attention of the proper school authorities. And since wiring and current costs are common to all lighting systems, true economy is achieved when the highest efficiency of lighting is obtained from these basic expenditures.

The Holophane Engineering Department will co-operate with you by furnishing lighting specifications, without obligation, either for new installations or for improvements in old buildings.



The Holophane Filterlite



Holophane Light and Vision Institute

HOLOPHANE

342 Madison Ave.,



COMPANY, INC.

New York City.

Works, Newark, Ohio.

New York

Chicago

San Francisco

Toronto

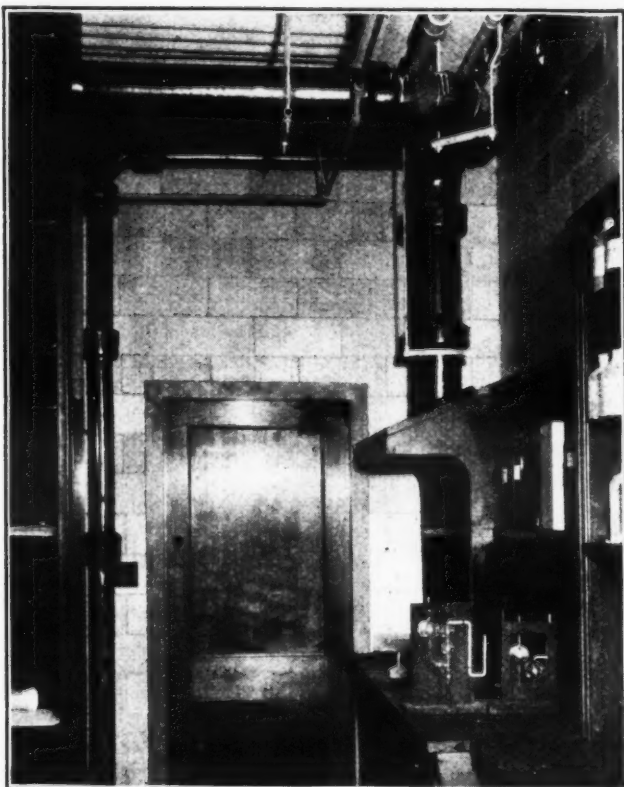
Holophane Company, Inc., maintains its own demonstration laboratories for the convenience of school officials and others who are interested in good lighting. These laboratories are located at 342 Madison Avenue, New York . . . also at the Holophane branch offices in Chicago, San Francisco and Toronto. In addition, there are permanent Holophane exhibits at the Lighting Institute, Chicago; Nela Park, Cleveland, and Westinghouse Lighting Institute, New York.

HOLOPHANE PLANNED LIGHTING DELIVERS THE MAXIMUM OF USEFUL LIGHT FROM MAZDA LAMPS



KNIGHT-WARE Waste Lines in Columbia Presbyterian Hospital Centre

The above photo was taken in the 10th floor laboratory and shows quite clearly the method of hanging KNIGHT-WARE Pipe and Fittings. There were 96 outlets on this floor. KNIGHT-WARE was used exclusively in this structure for all Acid Proof Waste and Ventilating Lines.



View in Chemistry Laboratory—Princeton University. All Waste, Drain and Ventilating Lines, Acid Dilution Basins, etc., at Princeton are of KNIGHT-WARE

We supply Acid-Proof Pipe and Fittings for Waste and Ventilating Lines in all bores from 1" up to 60". We are also prepared to serve you with KNIGHT-WARE Laboratory Sinks, Sumps and Catch Basins, Ventilating Flue Caps, etc., in fact, any acid-proof laboratory equipment that you may need.

*for Economy, Security,
Permanency, Specify*

KNIGHT-WARE

**Drain Lines : Laboratory Sinks
Ventilating Ducts : Acid Dilution
Basins : Ventilating Duct Caps**



**FOR HANDLING ACIDS AND CORROSIVE
WASTES SPECIFY**

KNIGHT-WARE PIPE AND FITTINGS

Positively acid, alkali and corrosion proof regardless of strength or temperature of solution . . . Tough and Durable and resist abrasion to the highest degree . . .

Economically and easily installed. Hung in the same manner as any other material, one hanger per length on horizontal lines and one support per ten feet on vertical risers only being required. Joints are economically made and easily poured and will withstand fully 20 pounds pressure . . .

Less expensive than silica irons and most other acid-proof equipment.

Permanent. Will last the life of the building in which it is installed.

**Our new 48-page catalog on KNIGHT-WARE
LABORATORY EQUIPMENT containing
complete details and fully illustrated will be
mailed upon request. Send for your copy.**

MAURICE A. KNIGHT
149 SETTLEMENT STREET
AKRON, OHIO

Offices:

New York City
804 World Bldg.
Beekman 3-1657

San Francisco
Merchants Exchange Bldg.
Douglas 375

Philadelphia
609 Arch St.
Rittenhouse 6300-6301

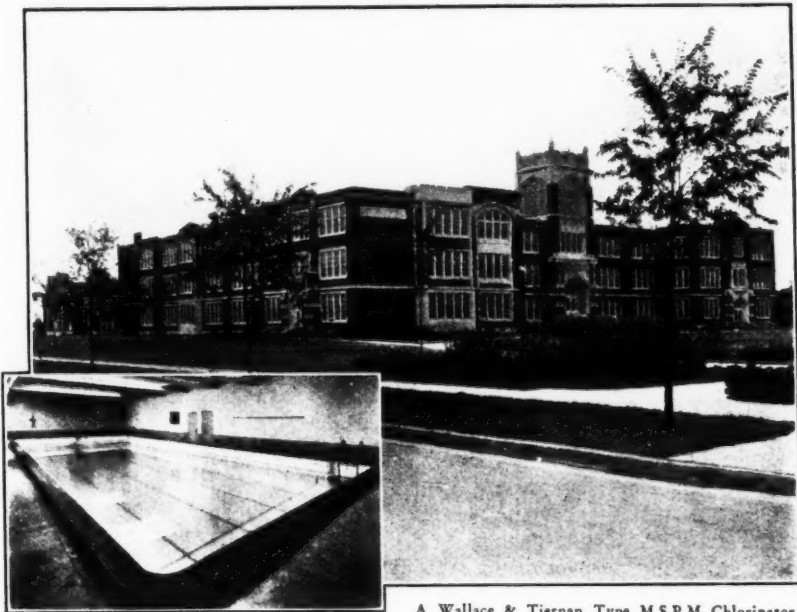
St. Louis
1st Nat'l Life Bldg.
Main 1784

Montreal, Que. 1307 Notre Dame St., W. Main 2625

Chicago
230 N. Canal St.
Franklin 4658

309 United Office Bldg.
Niagara Falls
Niagara Falls 507

PARENTS VOTE—



A Wallace & Tiernan Type MSPM Chlorinator sterilizes every drop of water in the Wichita High School Pool, Wichita, Kansas

Swim in  Drinking Water

A PRODUCT OF
WALLACE & TIERNAN

SP-14a

FOR CHLORINATED POOLS

Because no other method of disinfection affords such absolute health protection for their children.

By virtue of its residual germicidal action chlorination accomplishes complete sterilization at every point in the pool.

Over 300 American school and college pools are numbered among the 16,000 W&T chlorinator installations on water supplies, sewage treatment plants, and all types of swimming pools throughout the world.

Because W&T chlorinators are built to scientific correctness, users everywhere expect and receive dependable chlorination at low cost.

Technical publication 41 is information about the sanitation of swimming pools. A copy will be sent to any address on request.

WALLACE & TIERNAN CO., Inc.

Manufacturers of Chlorine and Ammonia Control Apparatus

NEWARK

NEW JERSEY

Branches in Principal Cities

(Concluded from Page 70)

employees have found places to dispose of it, for example, shoe stores, a few grocery stores, coal merchants, some landlords, sporting-goods houses, and a few others. The principal source of raising revenue from scrip has been the Peoples Gas Company and the Commonwealth Edison Company. Monthly gas and light bills can be paid in scrip and the teacher receives change in cash. For about two weeks, these two companies also permitted the use of scrip in payment for small purchases. A teacher might buy a 15 cent toaster or a 75 cent flashlight, give the company a \$25 participation-certificate, and receive back the difference in cash, plus a small amount of interest. These companies finally set up the requirement that the minimum purchase should amount to 70 per cent of the scrip to be cashed. The 18,000 employees of the Chicago schools must barter and bargain every time they make a small purchase—and nothing in sight seems to show any promise of relief. Possibly the governor's commission may work out a revenue-relief plan and the governor may then call a special session of the general assembly. Until that time the Chicago teaching force is in an unenviable situation.

The Chicago board of education does not employ watchmen in its schools. Last year there were 750 burglaries. This year there were 550 during the first six months of the year.

New Rules and Regulations

OTTUMWA SCHEDULE FOR DEDUCTION OF SALARIES DURING ABSENCE

The board of education of Ottumwa, Iowa, on July 1, has adopted revised rules governing the deduction of salaries for teachers who are absent from school. Under the rules, teachers are paid during absence, as follows:

Teachers may be absent for personal illness for five days in one school without loss of pay. If absent for a longer term, teachers will lose one

half of their pay at the rate of the monthly payment for ten days; afterward, they will lose full pay, including a pro rata of their deferred pay.

Principals absent for personal illness will lose no pay for five days in any one school year, and half pay for ten additional days, at the rate of a maximum-salary teacher. If absent for a longer time, such principals will lose their full pay, at the rate of their annual salary.

Teachers may be absent for three days for a death in their immediate family, without loss of pay.

Teachers absent more than three consecutive days must file with the superintendent a doctor's certificate stating that they were unable to be on duty during the time of absence. No allowance for illness will be made unless this certificate is filed before the day of the next payroll following the absence.

All teachers are paid in twelve monthly installments. Fifty dollars is deducted from the annual salary and the remainder is divided into twelve equal payments, payable on the first day of the calendar month, beginning with October 1. The deducted amount is paid with the July 1 payment to teachers who complete the full school year.

NEW RULES FOR BUS DRIVERS

The county board of education of Clinton county, Ohio, has issued certificates to school-bus drivers this year, in place of the final approval formerly given applicants by the various township and village boards. Applicants for drivers' certificates must apply through their village and township boards, and the applications are then forwarded to the county board for approval. The prospective drivers must have the official recommendation of the boards in their districts. The following rules are intended to apply in the issuing of drivers' certificates:

Drivers must be recommended to the county board of education by the local board of education from whom they are seeking employment.

Drivers must pledge themselves to exercise good discipline over the children intrusted to them for transportation.

Drivers must pledge themselves to abstain from the use of intoxicants while in the employ of the board of education.

Drivers must make full stops for the pupils to enter and leave the school bus.

Drivers must make full stops before crossing any railroad or interurban electric line and not proceed to cross such tracks until absolutely certain that no car or train is approaching from either direction.

Drivers must pledge themselves to abstain from swearing and the use of vulgar language, and not to indulge in the use of tobacco in any form or to permit the pupils to do any of these things while engaged in the transportation of children.

Drivers must not permit children to ride on the steps of the vehicle, on the running boards or fenders of a motor van or in any other dangerous position, but must require all pupils intrusted to them to be properly seated or located within the vehicle.

Drivers must further pledge themselves to drive on such schedule as the local board of education and superintendent of the school may adopt.

In case the bus has a rear door, it must be operated by the manual control of the driver.

The driver will work under the direction and supervision of the local superintendent. In all cases where the driver needs assistance with problems of transporting his children, he will immediately confer with his local superintendent.

RULES AND REGULATIONS

♦ The school board of Jackson county, Tenn., recently adopted rules for reducing the cost of graduation for parents of high-school students. Under the rules, the graduating class as a whole, was prohibited from purchasing class rings or pins, and was asked to refrain from sending out class invitations.

♦ The question of naming public schools after persons who have rendered distinctive service to city and state has been considered by the board of education of Milwaukee, Wis. The issue was finally formulated into a rule which provides that no school shall be named in honor of any person until ten years after his passing from life.

Planning the Teacher's Work on the Unit Basis

Gale Smith, Superintendent of City Schools, Rensselaer, Indiana

"The Teacher's Unit Lesson Plans" is one of the useful recent developments in educational practice. At this time, when many textbooks are being designed upon the unit basis, when the abundance of useful supplementary workbooks and like material is being projected upon the same unit plan, and when a number of recent state and local courses of study are being fashioned after a similar pattern, it is only logical that teachers and supervisors should begin to plan their lesson assignments on the same basis. Such unit lesson plans are being used successfully by the teachers in the city schools of Rensselaer, Ind. A technique has been worked out for handling them and the superintendent and teachers have found many points of superiority in this type of lesson plan over the older type.

Where the unit lesson plan is used, the traditional six weeks or monthly lesson plans with the more or less formal examinations or tests occurring at regular chronological intervals have been discontinued. The teachers lay out their lesson plans on the basis of the "work unit" or "topic unit" rather than on the basis of the time unit or grading period. The content of almost any course naturally falls into comparatively small divisions or units, each of which may be dealt with as a whole. In cases where the subject matter does not fall into natural units, the teacher makes an arbitrary division. With a little practice, any teacher is able to determine what best constitutes a "unit" for her own particular teaching situation.

A plan book for unit assignments has been devised to provide a flexible yet uniform means for each teacher to report the organization and progress of her assignments to the supervisor and at the same time keep a record of them for herself. Each plan consists of two parts: (1)

ical, indispensable arrangement to facilitate the supervisor's check-up of the plans. The teacher's name, the grade and subject for which the lesson was planned, and the date serve a similar purpose.

The unit is identified by name, if possible, as the "Discovery of America," or the "Plateau States," "The Executive Department," etc. If it is impossible to identify the unit by name in a satisfactory manner, it is identified by reference to pages in a book, or by number. However, every effort is made to identify each one by title.

When planning work on the unit basis, each teacher has in mind constantly that it is impossible to fix a uniform time allowance for all units of work. Units vary in length and of course the time required to work out each one will have to vary accordingly. Many different factors combine to cause a variation in the length of units. Perhaps the chief ones are: the total amount of time which is available for the class, the nature of the basic textbooks, the length of the recitation and study periods, the relative importance of the unit, the accomplishment level of the class, and the method which the teacher uses in conducting recitations. The teacher's experience and judgment are the determining elements in estimating this time allowance. The content of the unit is outlined very briefly and if possible, a statement is made of the work which is expected to be done each day during the progress of the assignment. All that the supervisor needs here, however, is the barest of skeletons. Some teachers wish to elaborate on the outlines for their own guidance and if this is desired they may use the back of the sheet which contains the carbon copy of the plan, or an extra sheet may be inserted in the plan book. The last item on the preliminary lesson plan is the suggested date on which the



DR. LEON A. NEULEN
Superintendent of Schools,
Camden, New Jersey

Dr. Neulen, who was born in Iowa in 1894, holds M.A. and Ph.D. degrees from Teachers College, Columbia University, and has had wide experience as a supervisor in towns in Minnesota, the Dakotas, and Illinois. He was for five years connected with the school system at Champaign, Ill., as supervisor of teachers, assistant superintendent, and later as superintendent. He is the author of numerous articles on educational problems and has written a professional book on the teaching of arithmetic. At Camden he succeeds Dr. James A. Bryan, who was head of the school system for 25 years.

unavoidable vacations, poor judgment on the part of the teacher, unanticipated slowness on the part of pupils, difficulty in locating reference books or maps, and unforeseen difficulties with some part of the content of the unit. The teacher is allowed to explain in the report, the reasons for any lack of correctness in the preliminary estimate of time, and she is also expected to give a report of any special difficulties which arose during the completion of the unit. No criticism falls upon the teacher who fails to make a correct preliminary estimate of the time needed for any unit, provided she shows a reason for the failure.

It was noted in the first part of this article that a test or examination at the end of each unit has been substituted for the test usually given at the end of a chronological grading period. These tests at the end of the units are an essential feature of this method of lesson planning. They should be of the new type because objective tests can be analyzed easily, and an analysis of test results from all units is one of the most important factors in the proper functioning of this plan.

After the tests are scored, each teacher makes a diagnostic chart of the results. In these diagnostic charts, the names of the pupils taking the test are arranged in a vertical column at the

REPORT ON LESSON PLAN

Office Copy: _____ Number: _____

(teacher) (grade) (date)

(subject) (unit)

Amount of time spent on Unit _____

In case the preliminary estimate of time proved incorrect, state here the reasons for difference.

Parts of Unit causing difficulty: _____

Test on the Unit was given _____

No. of questions _____ Objective, Essay.

Test results _____ Satisfactory, Unsatisfactory.

Copyright 1930 by Gale Smith, Rensselaer, Ind.

PRELIMINARY LESSON PLAN

Office Copy: _____ Number: _____

(teacher) (grade) (date)

(subject) (unit)

Estimated time to be spent on the Unit, _____

from _____ to _____

Content of Unit. (Outline each day's work as far as possible).

Test on Unit to be given _____

Copyright 1930 by Gale Smith, Rensselaer, Ind.

FIG. II. TEACHER'S REPORT ON LESSON PLAN

FIG. I. THE TEACHER'S LESSON PLAN

a preliminary lesson plan similar to that shown in Figure I, and (2) a report on the lesson plan similar to that shown in Figure II. These two parts are prepared in duplicate by use of a carbon sheet. The original or office copy is detached and handed to the supervisor and the carbon copy is retained in the book as a permanent reference for the teacher.

The right-hand side of each plan sheet is a form for a preliminary report on the lesson plan for the unit. The left-hand side is a report on the lesson plan. Each section is numbered in the upper right-hand corner, and the number on the report on the lesson plan must correspond to the number on the preliminary lesson plan to which it is related. This numbering is a mechan-

test on the unit is to be given. The preliminary lesson plan is filed with the supervisor on or before the date of beginning the work on any unit.

The report on the lesson plan (left-hand side of plan sheet) is a follow-up for the preliminary plan and is filed with the supervisor not later than the day after the completion of the work on a unit. This provides for a report on the amount of time actually spent on the unit. In some cases this does not exactly coincide with the time estimated. If such a situation exists, the reasons for the discrepancy are stated. Although they usually work out well, there are reasons why the preliminary time estimates may go astray. Among these reasons are unexpected or

Diagnostic Chart of Results of a Test Given at the End of Unit, "Magnetism", in High-School Physics

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Grace	X																	1
Hazel	X	X																2
Gerald	X	X																2
Tommy	X	X	X										X					4
Elwood	X	X	X					X					X		X			6
Albert	X			X	X			X					X			X		6
Mary	X			X	X	X	X	X					X					7
Milford	X	X	X											X	X	X	X	7
Chester	X	X		X		X	X							X	X	X	X	8
Dorothy	X			X	X	X	X	X	X				X	X	X	X	X	12
	3	4	3	1	4	1	4	5	2	2			4	3	4	3	4	

FIG. III. THE TEACHER'S DIAGNOSTIC CHECK OF A TEST

left side of the sheet and the numbers corresponding to the questions are arranged across the top. A check mark (X) placed in a square indicates that a pupil has missed a particular

(Concluded on Page 106)



To Pack More Into the Teaching Hours:

Have Strowger P-A-X private automatic telephone service in your school, with a phone for every teacher.

Hundreds of teacher-hours are saved each week in schools where P-A-X systems are installed . . . Saved by minimizing the time necessary for other than teaching duties.

For example, a conversation with the principal, otherwise taking five to fifteen minutes of a teacher's time (going to and from the principal's office, etc.) is reduced to a one-minute P-A-X call.

The time necessary for giving and getting information about delinquent or absent students, often taking a half hour of a teacher's day is reduced two-thirds to three-fourths with P-A-X service.

Conversations between teachers, exchanging information and suggestions, is a matter of four-second dialing.

No time is lost in writing messages and no student is sent from the classroom on messenger service.

Then, too, telephone conversations save so much of a teacher's strength—otherwise used in hurrying down halls and climbing stairs.

Furthermore, not only does P-A-X conserve teacher energy and those valuable teaching hours but it increases the effectiveness of a school management in a hundred ways. It makes it easy to attend promptly to every detail.

Before you get additional rooms or new teachers: find out what can be done by utilizing the hours P-A-X will save. Before you go far in the design of a new school—find out how modern, how indispensable is P-A-X!

There is a Strowger P-A-X to exactly suit the needs of your school—there are a number of systems designed particularly for schools (described in Circular 1527.) Write for it, or, easier still, write for the call of a P-A-X engineer!

P-A-X parts (monophones, switches, etc.) are "regular" public dial telephone equipment!

That's why you can be sure you are getting the highest quality and why you get a lower price, quality considered . . . Why you can be sure of having communication service that is steady day in and day out, prompt, private, and without the trouble and expense of a switchboard attendant. The three types of P-A-X monophones are illustrated here. All are described in Circular 1527—be sure you have a copy for your files!

Engineered, Designed and Manufactured by

Automatic Electric Inc.

Factory and General Offices:

1033 West Van Buren Street, Chicago, U.S.A.

Sales and Service Offices:

ATLANTA	CINCINNATI	DETROIT	NEW YORK	BOSTON
CLEVELAND	ST. PAUL	PHILADELPHIA	PITTSBURGH	
KANSAS CITY, MO.	LOS ANGELES	WASHINGTON, D. C.		

"No School Is Really Modern Without P-A-X!"

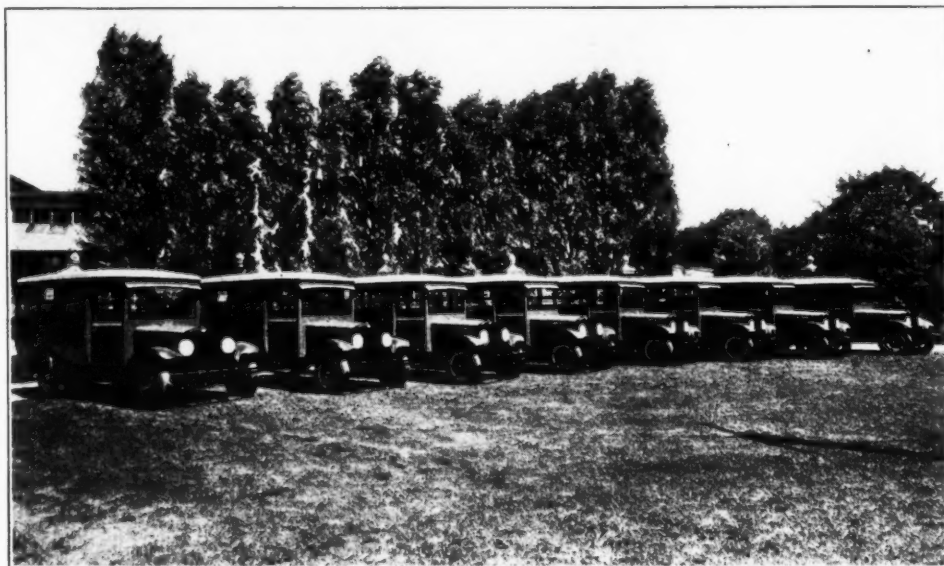


STROWGER
P-A-X
PRIVATE AUTOMATIC EXCHANGE



WHEN YOU SPECIFY "YORK-HOOVER" SCHOOL BUS BODIES YOU HAVE FULFILLED YOUR OBLIGATION TO THE FATHERS AND MOTHERS OF YOUR PUPILS—FOR SAFE AND COMFORTABLE TRANSPORTATION

BUILT FOR
ANY MAKE
CHASSIS WITH
A SUITABLE
WHEEL BASE
AND FRAME
LENGTH.



A FLEET OF SCHOOL BUSES READY TO LEAVE THE FACTORY
THESE ARE YORK-HOOVER SAFETY SCHOOL BUS BODIES MOUNTED ON
INTERNATIONAL HARVESTER COMPANY CHASSIS

DESIGNED AND MANUFACTURED BY
YORK-HOOVER BODY CORPORATION, YORK, PA.

A CATALOG
NO. 57
SHOWING
SCHOOL BUSES
AND OTHER
BUSES
IS YOURS FOR
THE ASKING.
WRITE TODAY.

Personal News of School Officials

♦ MR. JAMES L. KAUTZ, who has served for some time as chief clerk to the business manager of the board of education at Cincinnati, Ohio, has been appointed as commissioner of supplies, to succeed Mr. Charles E. Lex. Mr. Kautz had acted as assistant to the supplies commissioner during the past year and had been largely responsible for all purchases during a long period of years.

♦ MR. JAMES H. LYNCH has been elected president of the board of education at Pontiac, Mich. Mr. Lynch succeeds Mr. C. K. Patterson. The other officers of the board are Mr. A. C. NICHOLIE, vice-president, and Mr. G. P. WALLER, secretary.

♦ MR. RALPH A. BUTLER has been elected as deputy superintendent of schools at Buffalo, N. Y., in charge of the operation of the plant department.

♦ The board of education of Whiting, Ind., has re-organized for the year 1931-32, with the election of Mr. JOHN SALAPSKI, as president, Dr. O. E. BRANSKY, as treasurer, and Mr. J. R. GAMBRIL, as secretary.

♦ MR. H. W. REMELE and Mr. L. S. MILLER have been elected as members of the board of education of Crookston, Minn. They succeed Mr. J. J. Padden and Mr. H. C. Torrance who have retired.

♦ MR. G. A. DODSON, of Morrilton, Ark., has been elected superintendent of schools at Smockover, to succeed J. W. Rogers.

♦ SUPT. N. J. LASHER, of Seymour, Ind., has been reelected for a new three-year term, at his present salary of \$4,900.

♦ MR. J. W. ROGERS, formerly superintendent of schools at Smockover, Ark., has been appointed commandant of the Branham-Hughes Military Academy at Spring Hill, Tenn. During Mr. Rogers' service at Smockover, the high school was raised to a B grade, three school districts were consolidated, a high school and a Rosenwald school were completed.

♦ PROF. HORACE A. HOLLISTER, 73, professor of education emeritus and former high-school visitor at the University of Illinois, died in a Chicago hospital, Sunday, July 26. The funeral services were held on July 29, in Champaign.

♦ SUPT. A. M. WISNESS, of Willmar, Minn., has been reelected for a third year.

♦ SUPT. JAMES H. HARRIS, of Pontiac, Mich., has been reelected for a three-year term. Mr. F. J. Du-Frain, assistant superintendent, has been reelected for a two-year term.

♦ MR. E. M. BENNES and Mr. A. E. MATTSON have been unanimously reelected as members of the board of education at Thief River Falls, Minn.

♦ MR. R. W. VANCE, of Lake Benton, Minn., has been elected superintendent of schools at Perham. Mr. H. E. CHRISTOPHERSON, of Marshall, has been elected to succeed Mr. Vance at Lake Benton.

♦ MR. C. E. ULVESTED, of Granada, Minn., has been elected superintendent of schools at Verdi, to succeed C. R. Frakes.

♦ MR. A. H. BINGHAM, a former principal in the schools of Buffalo, N. Y., has been elected as assistant superintendent of schools.

♦ MR. H. V. COOPER has been elected superintendent of schools at Vicksburg, Miss., to succeed J. P. Carr, who resigned after completing forty years of service.

♦ MR. J. L. CLARK has been elected superintendent of schools at Coalton, Ohio.

♦ MR. W. M. KOHR, superintendent of schools at East Sparta, Ohio, during the summer, completed his work for a doctor's degree in school administration. Mr. Kohr already holds a master's degree from Ohio University.

♦ SUPT. L. F. SAMFORD, of Fairfield, Ill., has entered upon his second term of office.

♦ MR. S. V. LONG, of Grant City, Mo., has been elected superintendent of schools at Granite City, Ill., for the ensuing school year.

♦ MR. H. E. ZUBER, of Nelsonville, Ohio, has been elected superintendent of schools at Chagrin Falls.

♦ MR. L. C. WRIGHT, of Kent, Wash., has been elected superintendent of schools at North Bend, Wash.

♦ MR. L. D. SHUTER has been appointed assistant superintendent of schools at Columbus, Ohio, to succeed G. E. Roudebush.

♦ MR. O. F. DEETZ, of Painesville, Ohio, has been elected superintendent of schools at Nelsonville. Mr. Deetz succeeds H. E. Zuber.

♦ MR. F. L. SIEVERS, of Auburn, Nebr., has been elected superintendent of schools at Hebron.

♦ MR. CLAYTON OLSON has been elected superintendent of schools at Comstock, Iowa.

♦ SUPT. W. S. DIMMETT, of Forest Park, Ill., has been reelected.

♦ MR. O. T. KENT has been elected superintendent of schools at Noblesville, Ind., to succeed F. M. Starr.

♦ MR. R. E. OFFENHAUER, of Lima, Ohio, has been elected state director of the National Education Association, succeeding A. G. Eldridge.

♦ MR. F. C. GILMOUR has been elected superintendent of schools at Newton Falls, Ohio.

♦ SUPT. GEORGE C. DIETRICH, of Carrollton, Mo., who had been connected with the local school system for 43 years, died at a local hospital on July 27, after an attack of heart disease. He was elected principal of the high school in 1898, and in 1912 became superintendent of the school system.

♦ SUPT. W. R. BELL, of Carrollton, Ohio, has declined the offer of the superintendency at Mingo Junction. Mr. Bell will remain to complete his contract which expires next year.

♦ SUPT. F. E. CONVERSE, of Beloit, Wis., has been reelected for his 35th time. Mr. Converse has been superintendent since 1897, when he succeeded Mr. Merriman.

♦ MR. J. E. NESBIT, of Oxford, Ohio, has been elected superintendent of schools at Versailles.

♦ MR. C. A. BRUNER, of Washington C. H., Ohio, has been elected superintendent of schools at Mingo Junction, to succeed F. A. Gilmour.

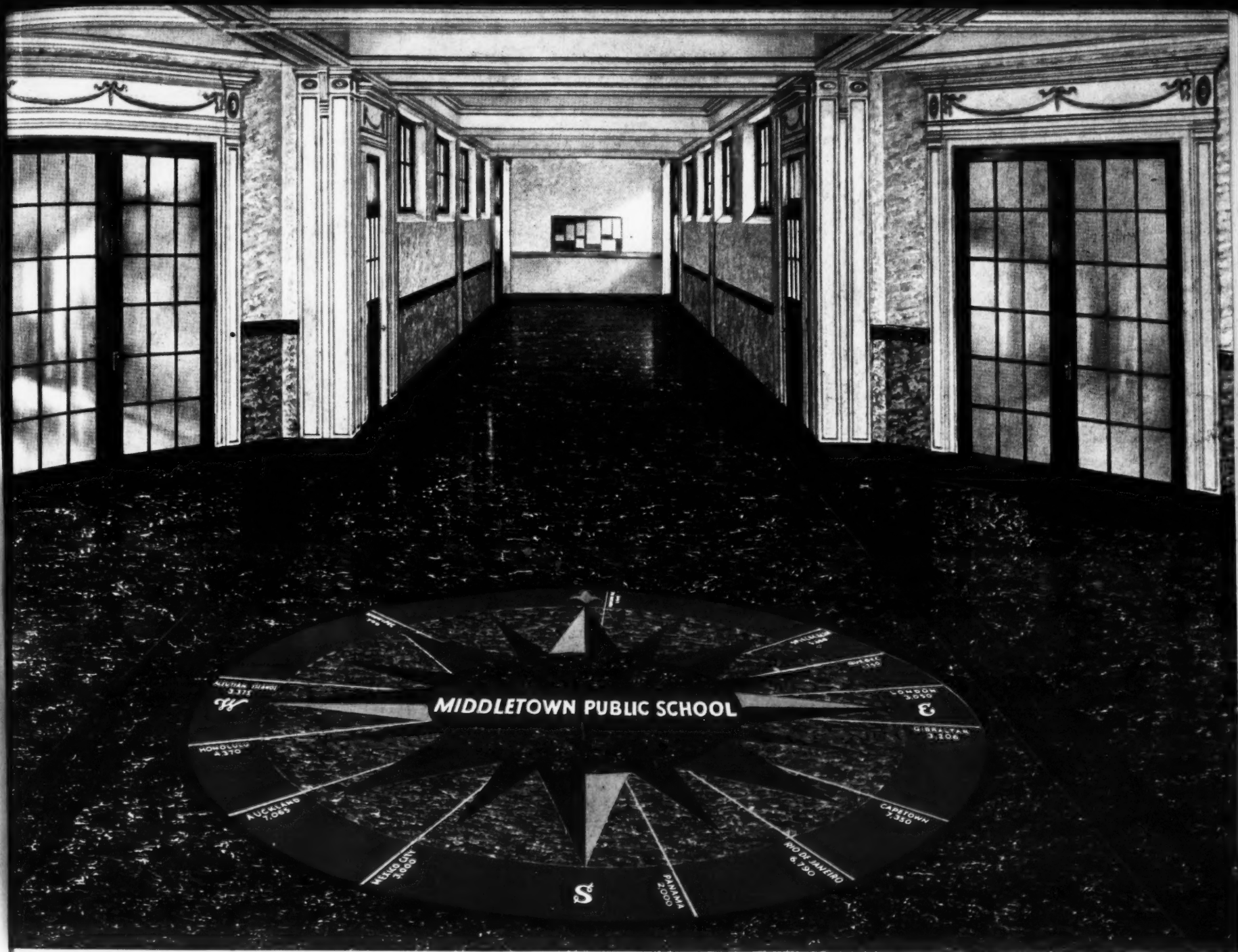
♦ SUPT. J. G. COLLECOTT, of Columbus, Ohio, has been elected as chairman of the public-school committee of the safety council of the chamber of commerce.

♦ MR. H. W. NEWTON has been elected superintendent of schools at Rockford, Ohio.

♦ MR. EDWARD O. MARSH, who had been connected with the schools of Jackson, Mich., for the past 32 years, died at a local hospital on August 4, following a long illness. Mr. Marsh had completed nineteen years of service as superintendent of schools upon his retirement in February, 1930. Through his work in Jackson, the local school system became nationally known and he was recognized as one of the outstanding school executives of the state. Mr. Marsh was a graduate of the University of Michigan, where he received the degree of A.M. and A.B.

♦ MR. ROBERT E. CRALLE has been elected deputy superintendent and business manager of the schools at Inglewood, Calif., succeeding Mr. G. M. Crozier, who has resigned after twenty years of service in the schools.

♦ MR. H. T. LOWE, of North Providence, R. I., has been elected superintendent of schools at Newport, to succeed H. W. Lull, who has become superintendent emeritus.



FLOOR OF SEALEX VELTONE LINOLEUM—NOCTURNE PATTERN, NO. 2955—WITH SPECIALLY DESIGNED SEALEX LINSIGNIA AND SEALEX BORDERS.



FLOORS THAT GO PLACES...

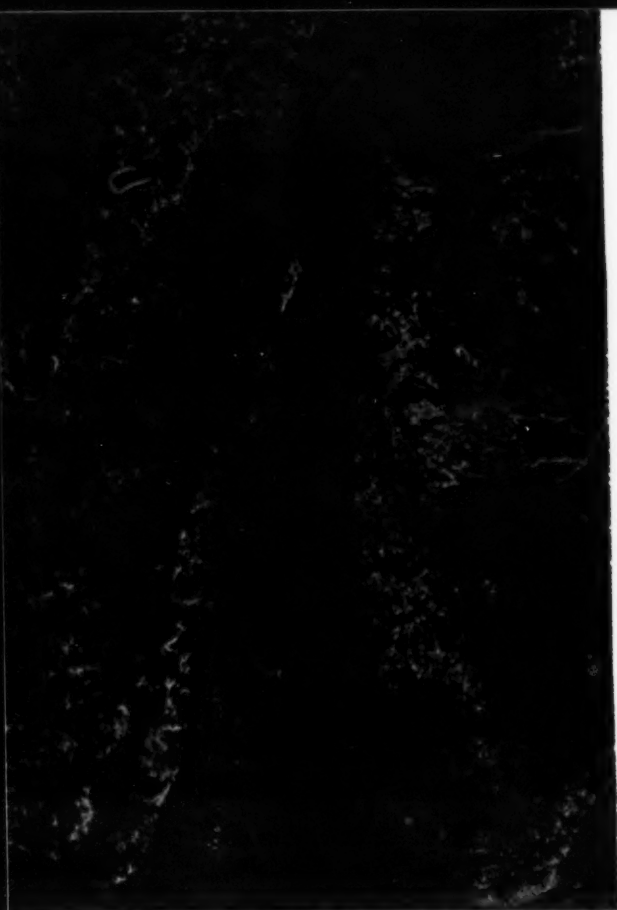
"Look, Bobby, follow that line and you'll come to Honolulu—just 4,370 miles away."

"Stand here, Jean, you're on the road to Rome."

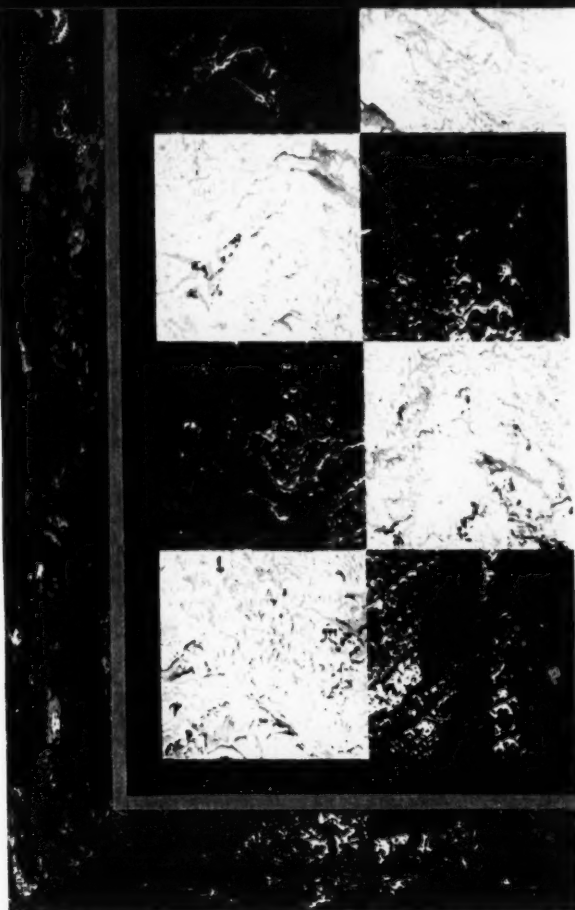
This floor is more than merely decorative. It fires the imagination—carries off the pupil to distant seas and far-away ports. This is not study—it is *Adventure!*

A geographic floor is only one suggestion. The design might

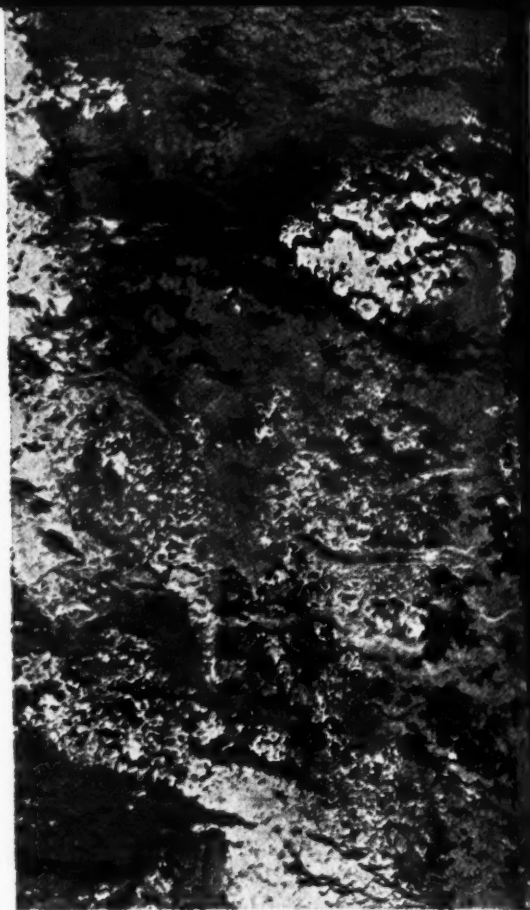
(See next page)



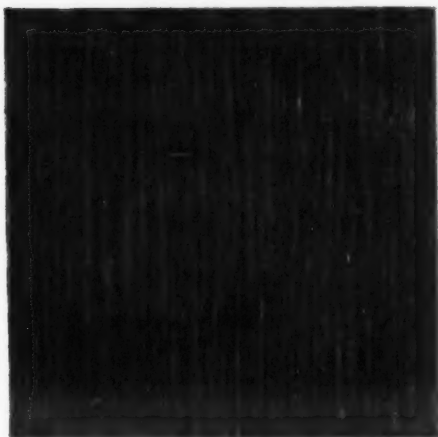
"ZANZIBAR"—SEALEX LINOLEUM 2951



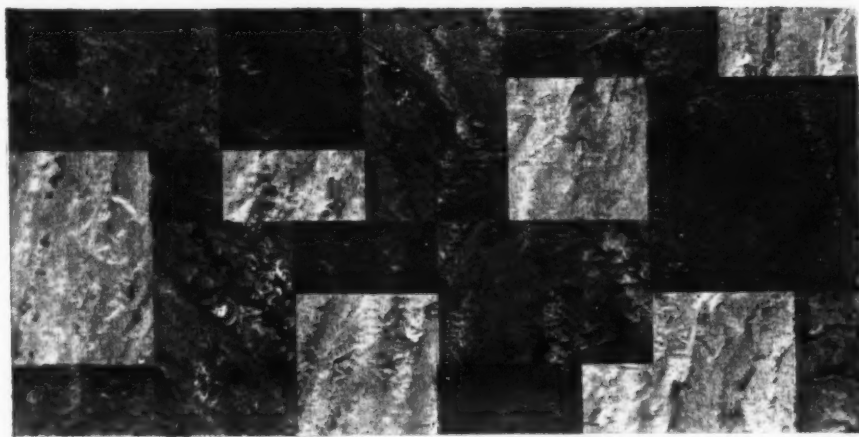
"DEAUVILLE"—SEALEX LINOLEUM 3041



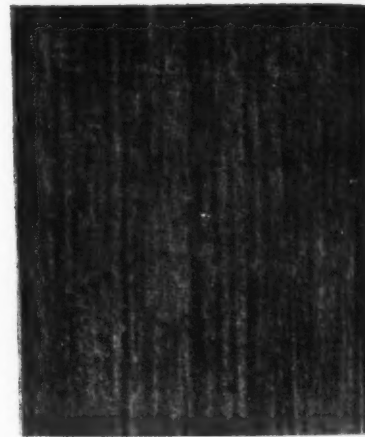
"VELMAR"—SEALEX LINOLEUM 2956



GREEN JASPÉ
SEALEX LINOLEUM 1256



"ROMANO"—SEALEX LINOLEUM 3322



TAN JASPÉ
SEALEX LINOLEUM 1253

easily be a lesson in astronomy—bright stars, constellations and planets shining out on a dark blue field. Or perhaps "school spirit" might insist on an enlargement of the academic coat of arms inlaid in the entrance hall floor.

How is it done? Simple enough—specially trained men cut up sheets of Sealex Linoleum into the various shapes specified by the designer. The different color units are then pieced together on the job, like a jig-saw puzzle, and cemented permanently in place.

Expensive? Not very! First, because Sealex Linoleum is a relatively low-priced flooring. Second, because Sealex Linoleum (although hard to wear out) is easily cut into any conceivable shape or figure.

So much for the entrance hall. Now what about corridors and classrooms? For these, we recommend a simple, heavy-duty, resilient floor—either Sealex Battle-

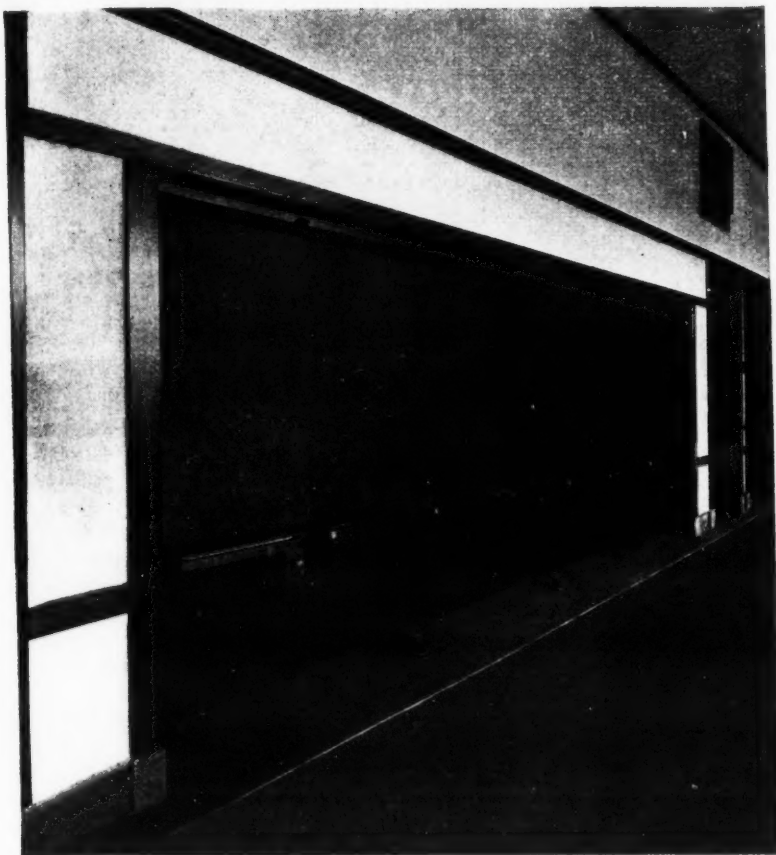
(See preceding page)

ship Linoleum or Sealex Jaspé Linoleum. These floorings are everything a good school floor should be. They are quiet—comfortable underfoot—easy to clean—famous for durability. Floor contractors all over the country are prepared to install them.

When installed by authorized contractors of Bonded Floors, these materials are backed by Guaranty Bonds. Write our School Floors Department for further facts and figures.

CONGOLEUM-NAIRN INC., KEARNY, N. J.





You can readily see from the above illustration what a convenient, even expanse of blackboard space this wardrobe presents.

It's so simple . . . You'll say so, too!

It's the first thing everybody has to say for this wardrobe with its convenient wide openings . . . its shallow depth inviting the sunshine and fresh air . . . its doors that open face to face! Yet to the teacher with all her responsibilities, simplicity is the Prose-Maco's most important characteristic. The Prose-Maco is famous for its multiple operation, single control principle. Send for illustrated catalog explaining in detail . . . today! Now! While there is still time to make an installation of this wardrobe before school begins.

Prose-Maco Manufacturing Co.
1524 Holmes St. Kansas City, Mo.

*Formerly Progressive School Equipment
Manufacturing Company*

Outstanding Prose-Maco Products: Swinging Bookboard, Teacher's Combination Wardrobe and Restroom, Removable, Non-removable Coat Hangers, Gravity Book Cases, Umbrella Stands, and the new Erasex.

♦ Mr. W. J. SWENSON, of Cavalier, N. Dak., has been elected superintendent of schools at New Rockford.

♦ Mr. HENRY F. MOERS, 62, a member of the school board at Racine, Wis., died at his home on August 6, following a heart attack.

♦ Mr. RICHARD BURKE, a member of the school board of LaFayette, Ind., died at his home on August 6, following a long illness. Mr. Burke was elected to the school board to succeed D. W. Simms, and had served as president and treasurer. He had been re-elected to the board for a full three-year term.

♦ Dr. W. E. SCHOWENGERDT is the new member of the board of education of Champaign, Ill.

♦ ROMAIN MCCALL has been re-elected a member of the school board of Ithaca, Mich. Dr. R. B. SMITH and DANIEL MCCUAIG were chosen members of the school board of Alma, to succeed themselves. M. G. ATWOOD was re-elected member of the school board at Caro.

♦ The school board of Monticello, Wis., has re-elected C. M. STAUFFER as president.

♦ J. E. GILSON, Mrs. M. J. SCHUMACHER, and W. M. ROOB were re-elected members of the Port Washington, Wis., school board. At Wautoma, Wis., E. L. YOUNG was chosen clerk of the school, W. D. JAMESON, treasurer, and W. E. RUSSELL, director—all re-elected.

♦ Mr. CRAWFORD GREENE, of Fayetteville, Ark., has taken up his new position at Blytheville.

♦ Mr. L. AVERY FLEMING, of McPherson, Kans., has assumed his new work at Plainville.

♦ Mr. LOREN BANE, of Bayard, Iowa, has assumed his new position at Pleasantville.

♦ Mr. E. H. PATTON, of Schulenburg, Tex., has taken the superintendency at Robstown.

♦ Mr. S. DEBORD, of Charlotte, Tex., has assumed the superintendency at Schulenburg.

♦ Supt. H. A. WOOD, of Munising, Mich., has been re-elected for his eighth consecutive year.

♦ The school board of St. Louis Park, Minneapolis, Minn., has reorganized for the next year, with the election of Mr. T. H. LAUER, Mr. J. R. GRAY, Mr. HARRY HUMASON, Mr. D. K. WHALEN, Mr. H. R. PARKS, and Mr. D. A. LUNDY as members of the board.

♦ Mrs. MARGARET EARLEY has been elected a member of the school board of Anderson, Ind., to succeed Mrs. A. D. Millsbaugh.

♦ The school board of Niles Center, Ill., has reorganized for the year, with the election of two new members, Mr. I. M. PAROUBEK and Mr. ALBERT SCHRABEL. The other members of the board are Dr. P. E. ALLEN, Mrs. EDNA G. BAUMEHARDT, Mr. C. E. LANGE, Mr. A. E. MAYO, Miss MILDRED TESS, and Mr. R. E. COTANCHE.

♦ Mr. S. K. GUERNSEY has been elected chairman of the school board of Orlando, Fla., to succeed the late Mr. KNOX.

♦ Mr. LUCIUS SMITH has been elected a member of the school board at Faribault, Minn., to succeed Mr. B. F. Fowler.

♦ Mr. OTTO DREWS has been elected a member of the school board at Manitowoc, Wis., to succeed C. C. West.

♦ The school board of Huntington, W. Va., has welcomed to its membership four new members, comprising Mr. T. A. CAVENDISH, Mr. A. H. FRANKEL, Mr. G. D. THORNTON, and Dr. THOMAS DUGAN.

♦ Mr. G. W. DONOVAN, Mr. W. F. DOBBERSTEIN, and Mr. F. C. HOBLER have been elected as new members of the school board at Elmira, N. Y.

♦ Dr. E. W. SENN has become a member of the school board of Owatonna, Minn., succeeding Mr. L. W. Kovar.

♦ Mrs. ANNA S. LINDSAY and Mr. E. L. WYLAND have been elected as members of the school board of Overland, Mo., to succeed L. R. Engel and F. W. Brand.

♦ Mr. W. M. THOMPSON, Mr. S. E. MAYOR, and Mr. J. B. MOLINEUX have been elected as new members of the school board at Metuchen, N. J.

♦ Mr. NORVAL SPEELMAN has been elected a member of the board of education of Garrett county, Md.

♦ Mr. W. J. ZAHN has been elected a member of the school board of Lehigh, Pa., to succeed Dr. David F. Dreibelbies.

♦ Mrs. JESSIE E. CROWNHART, of Madison, was appointed a member of the Wisconsin state normal school board.

♦ WILLIS HODINETT, was re-elected president, WILLIAM M. YOUNG, secretary, and A. C. EVANS, treasurer by the school board of Washington, Ind.

♦ The school board of Duluth, Minn., elected WILLIAM A. ABBETT as its president. Dr. C. L. HANEY was chosen treasurer.

♦ WILLIAM D. MOSS is the new member of the Marion, Ind., school board. The other members are GEORGE W. RAUCH and O. C. BRADFORD.

♦ The school board of Munising, Mich., has reorganized for the next year, with the election of Mr. W. C. DUFFETT as president, Mrs. W. C. TATE as secretary, Mr. F. E. MARSH as treasurer, and Mr. T. E. ROE and Mr. E. O. ERICKSON as trustees.

♦ Mr. L. O. CALDWELL, of DeSmet, S. Dak., has been elected superintendent of schools at Henning.

♦ Mr. J. F. CHURCH, of Cedar Falls, Iowa, has been elected superintendent of schools at Keota.

♦ Supt. D. F. DICKERSON, of Winona, Minn., has been re-elected for a term of one year.

♦ Dr. J. D. HILL, of River Falls, Wis., has been elected as president of the State Teachers' College at Superior, Wis.

♦ Mr. F. E. SHEETS has been elected superintendent of schools at Winifred, Mont.

♦ Mr. GERALD DIXON has been elected superintendent of schools at Sprague, Wash.

♦ Mr. LLOYD WEBB, formerly superintendent of schools at Newton Falls, Ohio, died at his home in Cleveland, on August 1. Mr. Webb served as principal of the high school, and was later superintendent for three years.

♦ The school board of Watertown, S. Dak., has reorganized for the next year, with the election of Mr. ANDREW MELHAM as president, Mrs. F. B. STILES as vice-president, and Miss MABLE HANSON as clerk. Mr. J. O. JOHNSON and Mr. MORRIS are the new members on the board.

♦ Mr. H. J. COLLIER, Jr., has been re-elected as business manager of the board of education at Fort Wayne, Ind. Mr. Collier will continue to act as superintendent of janitors, a position which he has filled since the death of Mr. Conrad Leidolf.

DEATH OF LOUIS M. DILLMAN

Louis M. Dillman, former president of the American Book Company, died in New York City on July 28, at the age of 72.

Mr. Dillman was connected with the American Book Company for forty years, most of the time in the Chicago area. In 1907 he was made manager of this division, and seven years later he was elected president of the company, with headquarters in New York.

Mr. Dillman, who was retired last April, was well known in the publishing field and had a wide acquaintanceship among the school people. He is survived by a son, Louis C. Dillman, of Chicago.



SANA-SEAL IMPROVES THE GAME

MAKE the stage setting complete for the game with Sana-Sealed Floors! Complete the drama of Athletics . . . with a beautifully finished Gym Floor supporting the players in action.

Half of the game is the floor and half the players. Without the right kind of a floor the players are handicapped so they cannot possibly play their best game.

SANA-SEAL on your floor will give the players 100% sure footing. It seals, preserves and finishes the Gym Floor and greatly beautifies it. The pleasure of the audience in watching a game depends on the picture—and a beautiful floor supplies the stage setting, inspires enthusiasm in both audience and players, and results in increased attendance and greater gate receipts. Try Sana-Seal now!

The HUNTINGTON LABORATORIES, Inc.
HUNTINGTON, INDIANA

Canadian Office and Warehouse, 36 Yonge St., Toronto, Ontario

SANA-SEAL

THE PERFECT SEAL FOR WOOD FLOORS

School Building News

♦ A radical reorganization of the building bureau of the New York City board of education has been planned, as a result of the department of education's investigation which revealed graft among the clerks and inspectors who helped contractors willing to pay gratuities for assistance in obtaining repair contracts.

The board plans a complete reorganization not only of minor employees in the bureau, but also of the transfer of the superintendents in charge of the bureau's offices in the five boroughs.

The deputy superintendents assigned to the borough offices are not involved directly in the graft charges made by the board's investigating committee, but each will be shifted to a different borough for the good of the service, and because suspended employees under their jurisdiction engaged in grafting for several years without detection.

♦ The school board of Seymour, Ind., has decided to issue bonds in the amount of \$45,000 to cover the remodeling of the Riley grade school. The school will be entirely modern, with an auditorium and a gymnasium.

♦ Independence, Mo. The board of education has purchased a site for a colored school, and another site of 43 acres for grade school, public playground, and athletic purposes. The cost of the latter, including improvement, will amount to \$30,000.

♦ Willmar, Minn. The school board has completed the erection of an elementary school, at a cost of \$10,000.

♦ Three Rivers, Mich. The school board has completed a new elementary school, which is the latest word in school architecture. It was designed and erected under the supervision of Mr. Warren S. Holmes, architect, of Lansing, Mich.

♦ Des Moines, Iowa. The school board has allowed approximately \$1,125,000 worth of fire insurance on city school buildings to lapse temporarily. The action was taken to allow time for a study of insurance needs and building conditions.

♦ Dayton, Ohio. Bids on exterior painting of fifteen school buildings, received by the business manager for presentation to the board of education almost belong in the "donation" class, according to Mr. J. W. Graham, business manager of the board. While previously it had been estimated that the entire job would cost approximately \$20,000, based on estimates of similar work in past years, the actual total for the entire work amounted to \$6,273. The specifications were drawn clearly and exactly, and it was intimated that persons getting the contracts would be required to deliver first-class work.

♦ Boston, Mass. Following a conference with the mayor, the school board has decided to spend \$2,000,000 for a new Dorchester High School and an addition for the boys' Latin School, and to defer for at least a year the erection of the proposed girls' high school. Previously, the school board had reached an agreement which provided for a division of the school money between a new girls' high school and a high school in Dorchester. The expenditure of the present fund for high-school construction is expected to exhaust all available appropriations and to complete the \$9,000,000 building program which has been in operation over a period of years.

♦ Las Animas, Colo. The voters have been asked to decide whether \$50,000 in outstanding bonds shall be refunded at a lower rate of interest. The bond election is limited to residents and the proposal is expected to effect a saving of \$2,000 should the bond be refunded. The new bonds will bear 4 per cent interest and will mature between 1931 and 1945, inclusive.

♦ Minneapolis, Minn. It has been estimated that fully \$2,000,000 will be required to make repairs and improvements to city schools, as ordered by the city building inspector and the head of the fire-prevention bureau, as a result of a survey of recommendations made.

The school board faces a lack of adequate funds for the undertaking. With a balance of \$31,000 in the repair fund, and a total of \$400,000 requested for 1932, it would take a long time to carry out all the recommendations. As a result of the situation, it was asked that a one-year moratorium be permitted on all new school construction, no buildings to be erected during the period. Instead, all funds to be obtained will be used for placing the present school plant in first-class condition.

A new survey will be started of the entire school plant, to determine buildings in which changes are needed to bring them up to the standard. Changes will be asked in every building more than five to eight years old to eliminate all possible fire hazards. It has been proposed that a plan be worked out to permit the overhauling of the entire school plant within the period of a single year.

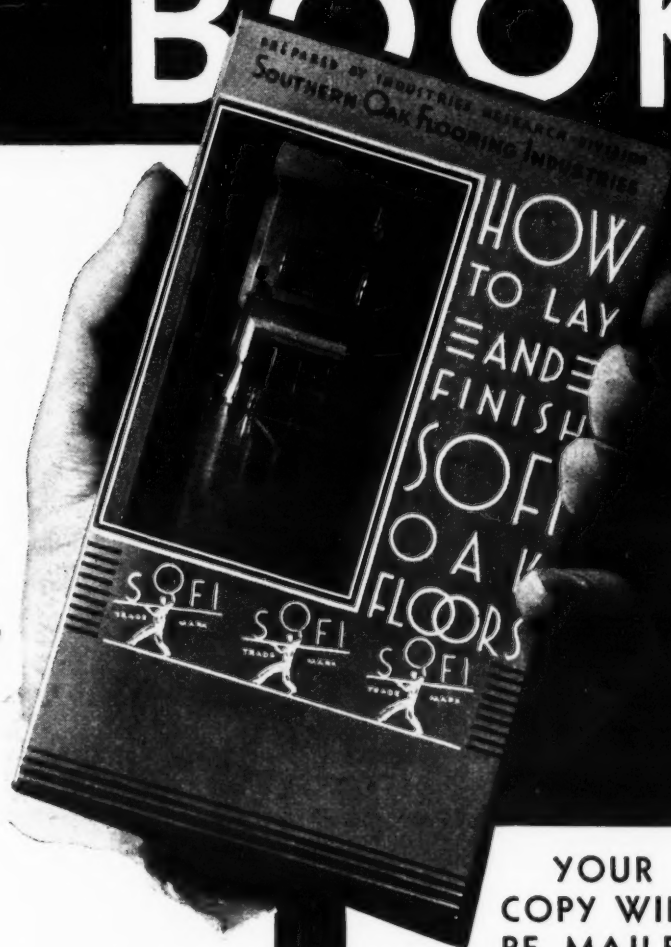
♦ Eau Claire, Wis. The school board has ordered a survey of the school plant, to determine whether there is need for a junior-high-school building. The proposed building would house 800 students and would be expected to cost \$325,000.

♦ Manitowoc, Wis. The school board has adopted a report of its committee, providing for a radical reduction in fire and tornado insurance for school property. The board has agreed to take out state fire insurance on all city school property, with the expiration of the old policies, which means a saving of 40 per cent in premiums over the former rates paid. In making the change, the board estimates that it would save over \$1,200 a year in premiums at this time. The city is paying \$9,143 in premiums every three years for this class of insurance.

♦ The county boards of education of Kentucky have been put on the pay-as-you-go basis by the court of appeals, which has invalidated a bond issue of \$26,000 by the Franklin county board of education. The decision puts a limit on a form of county finance which has grown by leaps and bounds within recent years. Approximately \$845,000 in refunding bonds formerly issued by county boards of education are invalidated. The court's ruling makes illegal \$2,500,000 of floating debts of the county education boards.

THIS BOOK

ENDS FLOORING REPLACEMENT Costs!



**YOUR
COPY WILL
BE MAILED
FOR THE ASKING**

Describing the low original equipment cost of SOFI Floors and the superior wearing qualities of Oak as flooring material, this invaluable book presents for the first time —

Complete information and instructions pertaining to the newly developed finishes for hardwood floors which add years of service and put replacement and maintenance costs at the irreducible minimum.

The contents of this new book on building maintenance economy are the results of intensive study and experiment by Southern Oak Flooring Industries Research, in collaboration with a group of America's leading chemical companies. *Send for your copy today.*



SOFI Oak Floors are the world's standard in hardwood flooring. You'll know SOFI flooring by the protective label on the flooring bundles, picturing the SOFI craftsman illustrated at the left.

SOUTHERN OAK FLOORING INDUSTRIES

932 BOYLE BUILDING, LITTLE ROCK, ARKANSAS

IN THE HEART OF AMERICA'S HARDWOODS

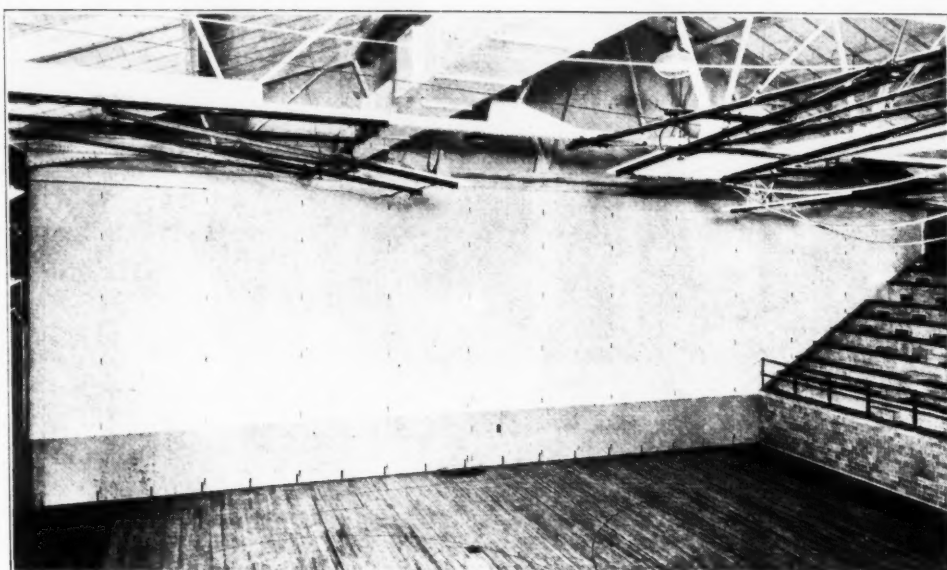
NOW -

LOOK AT THIS!

Just think of it. An enormous folding partition that can now successfully divide a bleacher without the use of curtains, hoist arrangements, etc. A standard Horn partition neatly fitted to the steps provides that long-looked-for something in gymnasium layouts.

No! The bleacher is not cut into. It simply is fitted with a small channel which takes care of the slope of the folding partition. It took Horn Engineers and Horn Experience to bring about this new era in gym construction. Notice the smooth surface of the partition and the close fit over the bleacher. A splendid piece of workmanship throughout and more yet—it is mechanically operated, like all Horn partitions.

If you have any folding partition problems—large or small—Horn Engineers can solve them for you. Investigate today.



HORN FOLDING PARTITION 86' 0" x 24' 0"
HIGH SCHOOL, SPRINGFIELD, MO.
WM. B. ITTNER, ARCHT., ST. LOUIS, MO.

THIS LAYOUT MADE POSSIBLE BECAUSE HORN PARTITIONS ARE
TOP HUNG, MECHANICALLY OPERATED AND USE NO FLOOR TRACK.

HORN FOLDING PARTITION COMPANY

Fort Dodge, Iowa

MANUFACTURERS AND INSTALLERS OF FOLDING PARTITIONS EXCLUSIVELY.

QUALITY + ECONOMY = HORN SELFOLD PARTITIONS.

School Finance and Taxation

SCHOOL BOARDS CONTROL FUNDS IN MAJORITY OF CITIES

Boards of education in about half of the cities of the United States, having a population of over 8,000, are financially independent, according to a survey recently completed by the Detroit Bureau of Governmental Research. Only two cities of over 30,000 population are dependent—St. Paul and Chattanooga—and in both the bureau reports there is constant agitation for change.

The trend is from partial independence toward independence. In 1902, 11 of 28 cities of over 200,000 population were independent. Today 19 of these educational systems are independent.

The practice in cities of over 8,000 population—377 in number—is tabulated as follows:

Cities of 8,000 to 30,000—Independent, 119; partially dependent, 45; special, 75; total, 239. Cities of 30,000 to 100,000—Independent, 40; partially dependent, 33; special, 18; total, 91. Cities over 100,000—Independent, 19; partially dependent, 19; special, 9; total, 37. Total—Independent, 178; partially dependent, 97; special, 102; total, 377.

Boards of education in cities of over 200,000 population fall into the following groups:

Independent—Chicago, Philadelphia, Boston, San Francisco, Pittsburgh, St. Louis, New Orleans, Louisville, Milwaukee, Kansas City, Mo.; Atlanta, Denver, Spokane, Omaha, San Antonio, Birmingham.

Partially dependent—New York, Detroit, Buffalo, Minneapolis, Newark, Rochester, Jersey City, Houston, Providence, Syracuse.

Special—Washington, Los Angeles, Oakland, Indianapolis.

The tax rate for Ohio cities and schools is fixed by a county budget commission.

SCHOOL PROPERTY IN NORTH CAROLINA

The public-school property in North Carolina used for elementary- and secondary-school purposes

was appraised at \$110,421,315 at the end of the school year 1929-30. Twenty-five years prior to this date the value of school property used for similar purposes amounted to only \$3,182,918. During this period, there has been a tremendous increase in the value of public-school property.

The increase in value for the year 1929-30 over that of 1928-29 amounted to \$2,564,423, or 2.4 per cent. This is the smallest percentage increase in value of school property during the 25-year period. In aggregate value it is the smallest increase since 1918-19, when the increase of that year over the preceding year was \$1,891,356.

The number of schoolhouses, it was shown, has been decreasing since 1918-19, when there were 8,239 buildings in use, 5,769 by white children, and 2,470 by colored children. Now there are a total of 5,825 schoolhouses used for elementary and high schools, 3,460 for the white race, and 2,365 for the Negro race. There were 264 fewer schoolhouses used in 1929-30 than in 1928-29. During this year there was a net decrease of 212 schoolhouses used by white children, and 52 by colored children.

The average value of a schoolhouse used by white children is now appraised at \$28,597, whereas 25 years ago \$530 represented this value; and last year, 1928-29, the sum of \$26,404 would purchase the average schoolhouse used by the white children of the state. The per-pupil value of the school property in the several rural-school systems has increased from year to year. The range is from \$312.74 in Currituck to \$27.77 in Ashe.

FINANCE AND TAXATION

♦ Milwaukee, Wis. The finance committee of the school board has presented a tentative budget for the school year 1932, which is the most conservative in the history of the school system. The budget provides for an appropriation of \$11,143,065 for all school purposes, of which \$8,750,500 will be raised by taxation, and the balance through bond issues.

♦ Ottawa, Ill. The school board has reduced the school-tax levy from \$137,000 to \$120,000, which represents a cut of approximately 13 cents on each \$100 of assessed valuation. The building fund was reduced from \$30,000 to \$13,600, and the educational fund from \$107,000 to \$106,400.

♦ Buffalo, N. Y. Supt. E. C. Hartwell, through his attorney, has filed a petition with the state commissioner, protesting against a reduction in the superintendent's salary. Mr. Hartwell contends that he has a definite contract with the board, which calls for a salary of \$15,000 a year for six years. The school board had sought to reduce the salary from \$15,000 to \$12,000 a year.

♦ Hobart, Ind. The school board has effected a saving of \$10,000 in operating expenses for the next year, through reductions in the salaries of bus drivers, a reduction in street-car transportation, and a cut in salary appropriations.

♦ St. Cloud, Minn. The school board has adopted a tax levy of 25.5 mills for the school year 1932. Based on an assessed valuation of \$9,000,000 and allowing for 5-per-cent shrinkage in delinquent taxes, the levy will provide approximately \$240,000 for the year. An additional \$34,000 will be received from state and federal aid, which will bring the total fund to approximately \$274,000.

♦ Ft. Scott, Kans. The tentative budget of the school board for 1932 calls for \$207,140, which is a reduction of \$11,237 from that of last year. Approximately \$3,000 of the reduction is in the item of instructional service. The remainder of the decrease was effected through a suspension of the levies for the construction of new schools.

♦ Champaign, Ill. The school board has asked for \$273,000 for the year 1932. Of the total, \$279,000 will be devoted to educational purposes, and the remainder, \$93,000, to the building fund.

♦ Decatur, Ill. The school board has effected a saving of \$60,000 in school costs for the coming year and has cut \$40,000 from the school-tax levy. The levy calls for \$645,000 for educational purposes, and \$215,000 for building purposes.

♦ A suggestion calling for the closing of certain Massachusetts normal schools, as an economy measure and to relieve the oversupply of teachers, has been recommended to the governor and the state school commissioner by the New Bedford school board. The committee's action is the result of a survey of conditions within the city, which revealed that 30 per cent of the teachers are now unable to find employment. It was believed that,

(Continued on Page 82)

HERE THEY COME!



as Noisy as ever!

THEY'RE BACK—eager, bright-eyed—bringing with them the same old problem—what to do about *noise*.

The problem is permanently solved in hundreds of schools that have discovered the simple, never-failing solution in Acousti-Celotex sound absorbing tiles. Acousti-Celotex is paintable and permanent.

Acousti-Celotex, applied to ceilings, subdues distracting classroom noises, absorbs the racket in corridors, cafeterias, manual training rooms, swimming pools and gymnasiums—quiets reverberation in assembly halls.

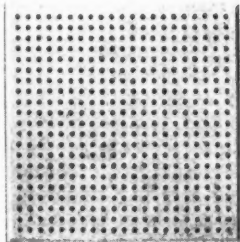
Acousti-Celotex comes in attractive tiles which are easily installed in old or new buildings. No remodeling is necessary—the tiles are applied directly to joists or over plaster. No interruption to school routine—the

work is done quickly and cleanly. The tiles may be left in their natural buff color, or stencilled in desired patterns. Painting does not impair the sound-deadening efficiency of this remarkable material.

Acousti-Celotex is applied by Acousti-Celotex contracting engineers, trained in acoustical problems. The school architect or school board may secure their services for a survey without cost or obligation. For an appointment, write to The Celotex Company.

The Celotex Company, 919 North Michigan Avenue, Chicago, Illinois. Sales distributors throughout the World.

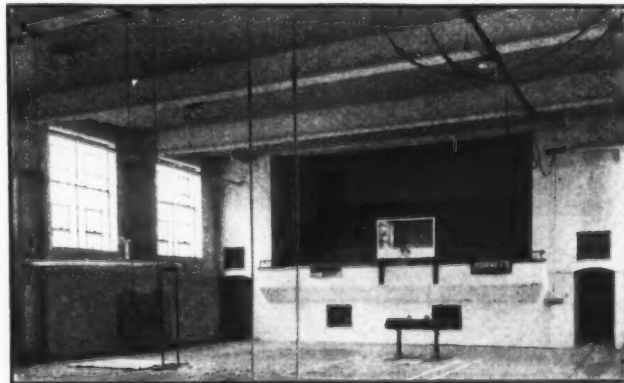
In Canada: Alexander Murray & Co., Ltd., Montreal.



Acousti-Celotex ceilings can be decorated like ordinary plastered surfaces. Use any kind of paint—the deep perforations you see here guard against the danger of impairing sound-absorbing efficiency.

PAINTABLE PERMANENT
ACOUSTI-CELOTEX
TRADE MARK REGISTERED U. S. PATENT OFFICE
CANE FIBRE TILE
For Sound Absorption

The words Celotex and Acousti-Celotex (Reg. U. S. Pat. Off.) are the trademarks of and indicate manufacture by The Celotex Company.



Buffalo Seminary, Buffalo, N. Y., uses Acousti-Celotex to control sound in the hard-surfaced gymnasium. Architects, Bley and Lyman, Buffalo.



Sheldon Ranges for Domestic Science

A new Sheldon Gas Range, small, compact, inexpensive, with burner and oven equipment for one or two students. It affords more convenient arrangements with less aisle space than the regular range. It provides a separate oven for every two burners. Made in three designs for locating between tables or at ends, also for unit kitchens.

A New CATALOG

Just Printed

700 Illustrations, 1500 Designs
of
Sheldon Furniture
for

Elementary, Vocational and High Schools
Colleges, Universities and Hospitals
Industrial Research Laboratories.

Write us your furniture needs.

We will deliver a catalog covering your requirements.

E. H. SHELDON & COMPANY, Muskegon, Michigan

E. H. SHELDON & COMPANY, Ltd., Sarnia, Ontario

(Continued from Page 80)

with some of the normal schools closed, the situation would not be so acute as at present.

♦ Lima, Ohio. The school needs for 1932 will require nearly the same tax rate as last year, or \$24 on each \$1,000 of property valuation.

♦ Toledo, Ohio. The operating cost of the city schools will reach a total of \$4,615,411 in the year 1932, with an additional fund of \$1,219,129 for sinking-fund purposes, making a total of \$4,982,500.

♦ Attorney-General O. E. Carlstrom, of Illinois, has recently ruled that the county clerk has power to extend a school tax in excess of the maximum rate for educational and building purposes when the district has outstanding bonds and interest and the maximum rate is insufficient to pay the ordinary expenses of the school and retire the bonds. The attorney-general held that there is no liability upon the clerk or his bondsmen for the extension of an excessive tax rate.

♦ Evansville, Ind. The 1932 budget of the school board provides for an appropriation of \$1,715,914, which is a reduction of \$87,180 from that of last year. The reduction was effected without cutting salaries, or curtailing the school program. The largest item in the budget is \$939,463 for instructional purposes.

♦ Manitowoc, Wis. The school board has ordered the cafeteria in the Lincoln High School closed for a year as a means of retrenchment. The board received a report, showing that the cafeteria had been operated during the past year at a deficit of \$900. The morning session will be closed ten minutes earlier, to permit students and teachers to go home for lunch.

♦ Massillon, Ohio. At the November election, the voters will be asked to determine whether the school term will be shortened because of inadequate finances. An emergency two-year, three-mill levy will be placed before the voters for approval. The action was taken because the board found itself unable to meet a loss in revenue through retrenchment measures. All teachers have suffered a 5-per-cent reduction in salary, and a similar reduction has been ordered for other employees, including the superintendent of schools.

♦ Davenport, Iowa. The school board has adopted a budget of \$941,703 for the school year 1932. The board has adopted an economy program which reduces the number of teaching positions and increases the duties of other teachers.

♦ Garfield Heights, Ohio. The board of education has approved a budget of \$313,590 for the school year 1932. The budget provides \$177,500 for teachers' salaries, and \$136,090 for general operating expenses.

♦ Troy, Ohio. The public schools will require an appropriation of \$179,818 for the year 1932. This is an increase of \$5,028 over the amount asked in 1931.

♦ Memphis, Tenn. The school board has decided to use the same textbooks this year, which means a saving of \$40,000 to school patrons. Supt. R. L. Jones said he did not believe it advisable to make a change this year, despite the fact that the textbook commission had adopted changes in books.

♦ Des Moines, Iowa. The school board has adopted a budget of \$3,271,377 for the school year 1932, which is a reduction of \$101,000 from that of last year. The largest reduction was \$100,000 in the school-building fund. The largest item in the budget is \$2,290,066 for instruction expenses.

♦ Chicago, Ill. One hundred board-of-education positions have been eliminated with the adoption of an economy program of \$2,310,065. The program does not provide for the contemplated savings of \$1,200,000 to have been effected by donation of one week's pay on the part of the employees. The eliminated items, which total \$1,309,500, are included in the original economy proposals. About 300 other positions will be abolished because of the elimination of bureaus and departments.

Distributed among departments, the savings will total \$817,015 in the educational department, \$27,200 in the law department, and \$1,446,350 in the business department.

♦ At Indianapolis, Ind., the local chamber of commerce proposes a radical cut in the school costs by eliminating night schools, special vocational schools, and kindergartens. The proposal is opposed by a citizens' committee, which says: "It is our conviction that the proposal to sacrifice the effi-

ciency and needful scope of our public-school work, even in the interest of a low tax rate, is a backward step and the most costly economy. It may not be amiss to remind ourselves that man cannot live by bread alone now any more than formerly. The agencies selected for suspension not only render great economic values, but go far in maintaining a healthy morale which cannot be estimated in dollars and cents."

♦ The citizens of Whitefish Bay, Wis., have voted a \$450,000 bond issue for the first unit of a new high school.

♦ Cincinnati, Ohio. A total of \$29,024 was expended by the schools last year for relief work in the families of pupils in attendance. Of the total, the school board contributed \$26,500, while the remainder was given by the superintendent's office, the teachers' association, the principals, and other individuals. The money was spent in the relief of 659 families for clothing, shoes, food, light, fuel, and insurance.

♦ Beloit, Wis. The school board has adopted a budget of \$478,650 for the city school district and Districts 1 and 2, during the school year 1932. The budget represents a decrease of \$11,000 in Districts 1 and 2, and an increase of \$6,000 in the city school district. A tax levy of 8 mills on the dollar on an estimated assessed valuation of \$32,100,000 for the city has also been adopted.

♦ Niles, Mich. The school board has adopted a budget of \$144,695 for the school year 1932, which is a decrease of \$51,069 from that of last year. The saving was effected by refunding \$28,000 worth of school bonds, and by a reduction of \$22,669 in operating expenses. Teachers retained from last year received no salary reductions, but new schedules have been adopted for incoming teachers.

♦ New Vienna, Ohio. The school board has effected a saving in the school budget by a rearrangement of the teachers' schedules and the elimination of one position.

♦ Xenia, Ohio. The school board has ordered that the school term be delayed two weeks in order to effect a saving of \$5,000 in school expenses. The 1932 school budget asks for \$172,556, or \$22,000

(Concluded on Page 84)

WHY THEY LEARN MORE SLOWLY IN THE *Twilight Zone*



*Sollux Luminaire, suspension type,
with panelled banger.*



IT IS a dark day—teachers are struggling with slow, dull pupils—the teachers themselves feel depressed. What are the reasons? Many reasons may be given, but one—the Twilight Zone* is usually responsible.

The Twilight Zone hinders learning because the sense of sight is the starting point for 70 per cent of our muscular responses, and as the eyes are slowed and strained by Twilight Zone lighting, so is learning power retarded.

To bring your school out of the Twilight Zone, install correct lighting, without glare, and without shadow. Westinghouse Sollux Luminaires provide this correct lighting—lighting that speeds learning, saves eyes, and helps teachers. Light from Sollux units is diffused—soft—approximating daylight. There is no glare—no obscuring shadows to hinder seeing.

Lighting for better teaching is assured by Westinghouse planned illumination.

**The deceptive half-light between obvious darkness and adequate illumination.*

Westinghouse Lighting Specialists will help you plan an effective lighting system

Westinghouse

T 31836



Portable Bleachers of WOOD or STEEL

—unsurpassed for portability

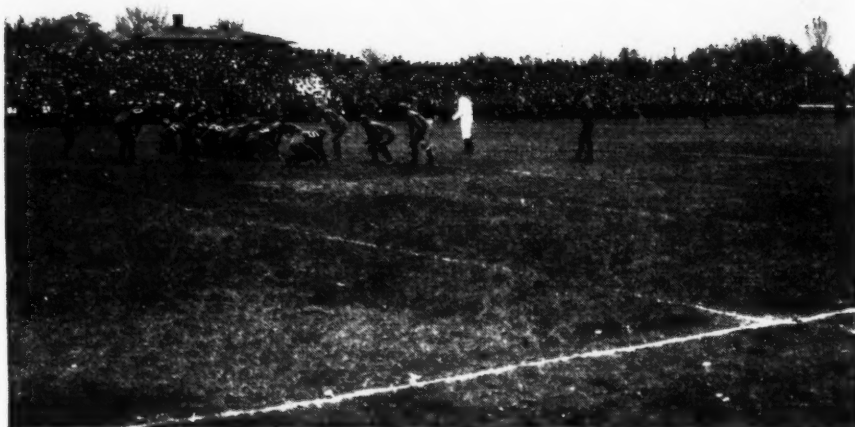
—unsurpassed for safety

Experienced users know there can be no compromise with quality in bleachers.

Of wood or steel — Circle A Bleachers provide superior design that means exceptional rigidity and resistance to strain. Materials are selected to give year-after-year service.

There are no small parts. No bolts or screws to lose. Each part locks together, simply and securely. They can be erected or dismantled quickly.

Choose either wood or steel. Each type is good for both indoors and outside. Outside now, for football—in the gym for basketball this winter. Send now for the data and moderate prices on these more *efficiently-designed* seats.



Circle A Products Corporation, 601 S. 25th St., Newcastle, Indiana. Also manufacturers of Circle A Grandstands—Permanent or Portable—Folding Partitions, Rolling Partitions.

CIRCLE A PORTABLE BLEACHERS

Steel . . . Wood

(Concluded from Page 82)

less than that for last year. The economies have been effected to meet a lowered tax duplicate and uncertainty as to the revenue that classification of taxes will bring next year.

♦ Steubenville, Ohio. The school board has adopted a resolution to place before the voters in November, a proposal to continue for five years, a 2-mill levy for school purposes. Unless the tax levy is continued, it will be necessary to reduce the school term from nine to eight months and reduce all operating expenses.

♦ Campbell, Ohio. The board of education has reduced the school term by two weeks and effected a saving of \$2,520 in salaries, in order to meet interest and maturities on school bonds. The budget for the coming year calls for \$350,000, the same as last year.

♦ Elyria, Ohio. The school board has adopted a budget of \$678,100 for the school year 1932, which is an increase of \$3,617 over the expenditures for 1931. The amount for operating expenses amounts to \$566,182, which is a decrease of \$2,789 from that of the past year. Bond interest requirements for next year were set at \$11,917, which is an increase of \$6,407 over the past year. The largest item in the budget is \$368,400 for instruction, of which \$353,400 is for teachers' salaries.

♦ Columbus, Ohio. The school board has adopted a school-tax levy of \$5,868.552 for the next year, which is \$192,355 below that of 1931. The levy is expected to cover the bulk of the estimated expenditures for 1932, which have been listed at \$6,351,241.

♦ Troy, Ohio. A total of \$179,818 will be required for the operation of the schools in 1932. This is an increase of \$5,028 over the amount allowed last year. Of the total, \$133,228 will be used for operating expenses, and \$39,090 for the sinking fund. Salaries of teachers will reach a total cost of \$87,000.

♦ Toledo, Ohio. The board of education has asked the county budget commission to appropriate \$4,882,500 for the operation of the city schools during the year 1932. The amount is about the same as that available for 1931.

♦ Davenport, Iowa. The school board has

adopted a budget for 1932, calling for appropriations amounting to \$1,095,021.

♦ Lima, Ohio. A budget of \$601,142 has been adopted for the operation of the schools in 1932. The amount represents a reduction of \$33,370 from that of 1931.

♦ Minneapolis, Minn. The school board has been asked to approve a budget of \$8,500,000 for the school year 1932, which is about \$100,000 in excess of that for last year. The budget will require a 22.5 mill levy, which is three hundredths of a mill below the 1931 levy.

♦ Lockland, Ohio. A budget of \$132,200 has been adopted for the year 1932, which is \$7,000 less than that of last year.

♦ Bucyrus, Ohio. The school board has adopted a budget of \$204,440 for 1932, which is \$12,000 below that of last year, which amounted to \$216,000. The amount to be devoted to operating expenses will reach \$134,140.

♦ New York, N. Y. With a budget of between \$145,000,000 and \$150,000,000 facing it, the finance committee of the board is reducing the grants tentatively allowed in order to bring the total below \$143,000,000 if possible.

The budget allowed for the current year was \$140,384,885. For next year the committee has allowed increases that amount to more than \$6,000,000, with a number of the larger departments to be considered. The chief increase was almost \$3,000,000 for additional teachers to care for the great increase in registration in the high schools.

Another is the \$1,500,000 for repairs and alterations, \$205,000 for evening schools, \$525,000 for ungraded classes and additional visiting teachers, and substantial increases for play activities and other special departments.

State-aid grants, it is expected, will be less than anticipated during the year, due to an unusual absence of pupils, which has reduced the state aid nearly \$1,000,000. This loss will be met by increases in the city's share of the school budget.

♦ Wauseon, Ohio. The coming school year will see the elimination of all bonded indebtedness of the school system. The school board has made plans for paying the last note issued during the world-war period.

♦ Minneapolis, Minn. The school board has adopted a budget for the year 1932, calling for a total expenditure of \$8,565,341, or an increase of \$74,000 over last year's budget.

♦ Springfield, Ill. The finance committee of the school board has presented a budget, calling for an expenditure of \$1,198,000 during the next school year. Last year's budget was \$1,126,750. The increase has been attributed to the erection of a new school which is to cost \$97,000.

A number of items have been cut down in the new budget, effecting a saving of about \$16,000. It is expected to save \$1,000 on general supplies, \$2,000 on construction supplies, \$500 on maintenance supplies, \$2,000 on fixed charges, and \$5,000 on insurance.

♦ The annual school meetings throughout the State of Wisconsin have indicated a trend toward lowering the tax levy for the maintenance of the schools. In most of 24 towns from which figures were available, reductions were made in the levy. Ellsworth, Balsam Lake, Baldwin, and Clear Lake were the only districts among the 24 who did not lower the levy.

Reductions ranged from \$500 at Barron to \$8,000 at Cumberland and Elmwood. Several schools where drastic reductions were made have large sums in the treasury. Cadott had \$11,143 in the treasury. Elmwood had \$5,000, Osceola had \$15,240, and Cumberland \$31,600. The highest tax levy was at Hudson, where \$48,896 was voted, and the lowest was at Webster where only \$2,000 was raised. At Elmwood, the reduction was just about half of last year's levy, or \$8,000.

♦ Steubenville, Ohio. The 1932 budget of the school board calls for an expenditure of \$573,491 for operating expenses during the year. The largest item in the budget is \$446,000 for instruction purposes. In addition to the general fund, there is an item of \$100,000 for the bond and interest fund, making a grand total of \$673,491 for the year 1932.

♦ Akron, Ohio. Supt. T. W. Gosling has presented a budget to the school board, calling for an expenditure of \$5,452,165 for the next school year. The budget represents a decrease of \$224,000 from that of last year.

A NEW MEDART CATALOG ON BASKET BALL



Gymnasium Apparatus
The ultimate in apparatus perfection acquired by the knowledge and experience of 58 years of service to schools.
Send for Catalog G-1.



Playground Apparatus
A thoroughly complete line designed and constructed for safety, durability and economy.
Send for Catalog M-5.

This catalog illustrates basket ball backstops for gymnasiums, field houses, auditoriums, etc., including types for every conceivable structural condition—extended backstops, suspended types, swing-forward, swing-backward, balcony and stage types. Also field house and other portables. Various banks and goals.

Included is information on fittings to be installed at time of construction for later attachment of backstops to avoid expense of tearing into finished ceilings, enclosed girders, etc.

Directions and diagrams cover the marking of courts. The new Medart electrically controlled scoreboard is also featured.

Rather than merely a catalog, this is a text-book on the preparation of the new gym for basket ball, for the guidance of the school official and architect; an invaluable book on the subject, sent free upon request.

Send for Basket Ball Catalog BB-1



Steel Lockers
A size and type for every school purpose. Built to serve better and last longer. School Furniture Brown finish at no extra cost.
Send for Catalog L-3.



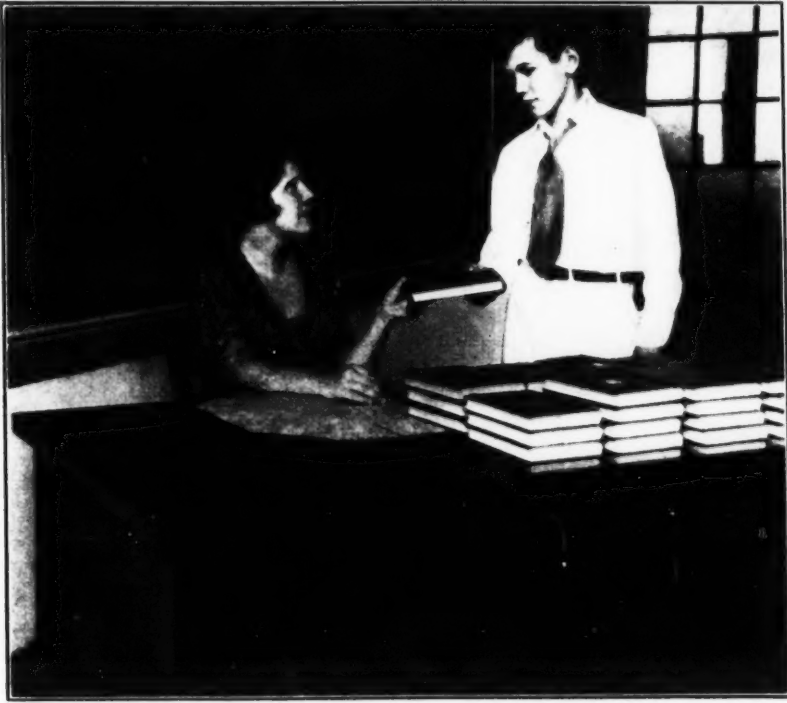
Steel Cabinets
Securely built and conveniently arranged. A wide selection of sizes and finishes to excellently serve school needs.
Send for Catalog C-10.

FRED MEDART MANUFACTURING CO.

Potomac and DeKalb Streets
St. Louis, Missouri

Engineering Sales Offices in Principal Cities

511 West 42nd Street
New York, N. Y.



NEW TODAY

How Long Will They Last?

How many of the new books issued this month in your schools will be in good condition next year? And the year after? And the year after that?

Text books in some schools last four years and more. In other schools replacements run to a high percentage in one year's time. This difference is seldom due to the pupils. *It is due to the materials used in binding the book,—to the sewing, the cloth and most of all to the board used for the covers.*

Binders Board is manufactured primarily for making strong, durable book covers. It is a solid board, uniform in composition and far denser and tougher than any substitute. Specify it in your book orders and prolong the life of your books.

BINDERS BOARD MANUFACTURERS' ASSOCIATION

O. M. Porter, Secretary
CHANIN BUILDING New York City

MEMBERS:

Colonial Board Company.....	Manchester, Conn.	Otter River Board Company	Otter River, Mass.
Consolidated Paper Company.....	Monroe, Mich.	Riverside Paper Manufacturing Company	Glastonbury, Conn.
The Davey Company.....	Jersey City, N. J.	Waldorf Paper Products Company	Saint Paul, Minn.
Fandango Mills.....	Millburn, N. J.		
C. H. Norton Company.....	North Westchester, Conn.		

Gregg Shorthand Books

Anniversary Editions

BASIC BOOKS

Gregg Shorthand Manual (Gregg).....	\$1.50
Gregg Shorthand Junior Manual (Gregg).....	1.50
Gregg Speed Studies (Gregg).....	1.20
Progressive Exercises in Gregg Shorthand (Gregg).....	.50
Graded Readings in Gregg Shorthand (Hunter).....	.75
Rational Dictation (McNamara and Markett).....	1.40

SUPPLEMENTARY BOOKS

Word and Sentence Drills for Gregg Shorthand (Markett).....	.60
Gregg Shorthand Dictionary (Gregg).....	1.50
Gregg Shorthand Phrase Book (Gregg).....	1.00
Intensive Exercises in Shorthand Vocabulary Building (Swem).....	.76
5000 Most-Used Shorthand Forms.....	In preparation
Progressive Dictation (Wilson).....	.56
Dictation for Beginners (Bisbee).....	.72
Short Business Letters for Dictation (Gross).....	.60
Transcription Drills (Ross).....	1.20
Vocabulary of the Gregg Shorthand Manual (Gregg).....	net .25
Teaching Gregg Shorthand by the Analytical Method (Frick).....	2.00
Diagnostic Testing and Remedial Teaching of Gregg Shorthand (Rollinson).....	2.80
Diagnostic Tests in Gregg Shorthand (Rollinson).....	In preparation
Gregg Reporting Shortcuts (Gregg).....	2.25

READING BOOKS

Aesop's Fables.....	.24
The Diamond Necklace (de Maupassant).....	.16
The Great Stone Face (Hawthorne).....	.24
Alice in Wonderland (Carroll).....	.60
Rip Van Winkle (Irving).....	.28

Order from our nearest office

THE GREGG PUBLISHING COMPANY
New York Chicago San Francisco Boston Toronto London Sydney

The Acid Test

What more exacting test can there be of dictionary leadership than the judgment of the educational world?

Every State that has adopted an unabridged dictionary for use in its schools has chosen exclusively

WEBSTER'S NEW INTERNATIONAL DICTIONARY

The Colleges voted overwhelmingly in favor of Webster as the standard of pronunciation, in answer to questions submitted by the Chicago Woman's Club.

Nearly 100% of all schoolbooks are based on the New International for pronunciation, spelling, compounding, and division of words.



The New International has been universally accepted by those best fitted to judge.

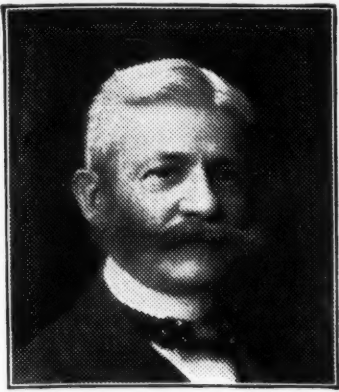
It is in accord with the best modern practice.

Use it in your own schools.

Write for our free booklets of interesting ways to teach the use of the dictionary.

GET THE BEST

G. & C. MERRIAM COMPANY
SPRINGFIELD, MASS.



Again QUALITY COUNTS! More

HOLDEN BOOK COVERS

have been sold this year in the

Unfinished Leatherette Quality!

To Protect books from Daily Wear, Handling and Abuse requires the
Most Durable fiber material.

Wear, Water, Weather, Waste Proof

Order Now for All New Books—Samples Free

HOLDEN PATENT BOOK COVER CO.

MILES C. HOLDEN, President

Springfield, Massachusetts

Rules Governing School Custodians

The board of education of St. Joseph, Mo., recently revised its rules and regulations governing the employment and control of custodians, janitors, and engineers. Instead of placing them under the department of maintenance the new rules place them under the superintendent of schools. The rules and regulations, as revised, read as follows.

Terms of Employment

Rule 1. A candidate for the position of custodian or engineer must be under 60 years of age, of good moral character and not addicted to the use of intoxicating liquor. He must present to the Committee on Janitors a certificate signed by the Director of Hygiene indicating his physical condition as determined by a physical examination made by the director. In buildings heated by steam, candidates for the position as engineer must hold an engineer's license in compliance with the city ordinance.

Rule 2. a) Candidates and engineers may be employed for ten or twelve months in the year or at the pleasure of the Board and shall be under the general supervision and direction of the Chief Engineer and the Superintendent of Schools and under the immediate direction of the principal of the building.

b) Custodians and engineers shall recognize the fact that the principal is in charge of the educational activities of the school building. They shall report to the principal and shall fulfill requests of the principal and the Superintendent of Schools. Failure to cooperate with the principal or Superintendent of Schools shall be reported at once to the Janitors' Committee and shall be considered as just cause for dismissal.

Janitorial Duties

Rule 3. a) Each custodian shall be responsible for the cleanly condition of his building and he must be observant of dirt, dust, and bad odors, and see that the same are removed without having special attention called thereto. All rooms, halls, and stairways shall be swept clean daily and all desks, tables, seats, chalk rails, window sills, etc., shall be dusted daily. Auditoriums, gymnasiums, manual-training, and other special rooms must be kept in as good condition as classrooms. All basements must be kept clean and free from accumulation of rubbish. Every effort must be made to reduce fire hazards. Special precaution must be taken to see that all toilet rooms, drinking fountains, etc., are kept clean and sanitary, that disinfectant is used freely and that toilet paper, paper towels, and liquid soap are available at all times.

b) The custodians shall keep their buildings and furnishings in good repair making such minor repairs as they are able and reporting to the chief engineer needed repairs which they are unable to make. During school vacations the buildings shall be given a thorough cleaning, walls wiped down, woodwork, furniture, and windows washed and floors scrubbed, and the necessary oiling, painting, etc., taken care of. The grounds and walks around the buildings must be kept clean at all times. Snow and ice must be removed from the walks and steps as soon as possible.

c) Custodians shall be at their respective buildings every school day from at least 7 a.m. till 5:30 p.m., and as much earlier or later as may be required in severe weather and at such other times as necessity shall demand without extra pay. They shall not be required to remain in their buildings after 1 p.m., on Saturdays unless special work is in progress, the

regular work is incomplete, or some emergency arises.

d) Teachers shall be accorded the privilege, if they so desire, of remaining in their rooms, free from interruption by the custodian, for 30 minutes after the close of the regular daily session. Teachers and principals of grade schools shall be accorded the privilege of remaining in the building until the custodian has completed his evening duties and shall then vacate the building so that the custodian may lock the doors, except that such vacation shall not be requested by the custodian before 5 p.m.

e) The custodian shall not sweep the halls, stairways, or rooms during school hours except by special permission of the principal, nor shall he sweep any classroom while children are occupying the room at the request of the teacher, subject to regulations in (d).

Rule 4. All outside doors shall be kept unfastened at all times during school hours or as long as children remain in the building. In schools where both engineers and custodians are employed, the engineer shall have exclusive control of the heating and ventilating system. He shall be required to make any minor repairs necessary in heating or in plumbing and to report to the Chief Engineer any needed repairs which he cannot make. He shall cheerfully comply with any request for service made by the principal, provided such service does not interfere with his duties in heating and ventilating the building.

Rule 5. a) Janitors receiving \$35 or more per month, who may be absent on account of sickness, will receive one-half pay during said sickness, not to exceed thirty days during any school year, and any attempt to impose upon this rule will result in immediate dismissal.

b) All janitors and engineers, when absent on account of death in the family, shall receive half pay for time not to exceed one school week. Family, as used in this section, shall be held to include father, mother, sister, brother, husband, wife or child, or any other relative who is a member of the household. Absence for a part of one day to attend the funeral of any other relative closely associated with the janitor or engineer may be granted by the chief engineer without loss of pay.

c) Immediate notice of absence for any cause must be given

KEYSTONE OF AMERICAN EDUCATION

The teaching profession is one of the most self-sacrificing, most modest, and at the same time most powerful professions in the world. Within the profession the classroom teacher stands as the keystone of American education. May her rewards, spiritual and material, be in ever-increasing proportion to her consecrated and devoted labors; and may the confidence of her fellow citizens in the effectiveness of her contribution to society ever remain steadfast.—Marion Wade Doyle, Washington, D. C.

the chief engineer and through him to the proper executive officers.

d) Janitors absent from duty for any other cause than sickness must obtain permission from and make satisfactory arrangements with the chief engineer.

Rule 6. a) Night Work at High Schools. For all occasions requiring the opening of the auditorium, except those pertaining to strictly high-school affairs, the janitor and engineer shall each be paid \$2.50 for each occasion. During the period of employment of night engineer, no extra pay to engineer to be allowed. For occasions pertaining to high-school-students' affairs, no payment shall be made with the exception that if more than one a month occurs, such extra ones shall be classed as pay occasions. When the gymnasium is used instead of auditorium the same rules shall govern except that the pay for janitor and engineer shall be \$1.50 each.

b) Grade Schools Having Janitor and Engineer. Upon all occasions, except those applying to student affairs for that particular school, that require the opening of the building at night, janitor and engineer shall receive \$1 each when the attendance of both is required. If the janitor alone is needed, he shall, in this case, receive \$1.50. For student affairs of that particular school, no payment shall be made with the exception that if more than one a month occurs, such extra ones shall be classed as pay occasions. Grade schools having janitor only, the same ruling as applied to grade schools with janitor and engineer shall govern in this case with the exception that the pay allowed shall be \$1.50 for each occasion.

c) In the case of meetings of parent-teacher associations, improvement clubs and community singing, the charge for such meetings will be carried by the District, with the proviso that if any one of such organizations holds more than one meeting in a calendar month, it shall pay the charges for such extra meetings.

Rule 7. a) Custodians shall have sole charge of their respective school buildings during the absence of the principal and all damages caused by the janitor's negligence shall be charged to him.

b) They shall under no circumstances part with the custody of the keys to outside doors to any person, or permit idlers in or around the buildings at any time. They shall exclude from the building and grounds all persons who are not there on legitimate business, and shall enter complaints to the nearest police authorities against all persons found prowling around the school premises or annoying the school in any manner.

Rule 8. No smoking in or around the building shall be permitted except in the engine room and the use of intoxicating liquor is strictly forbidden.

Rule 9. a) Custodians must not permit matches to lay around the building, but must keep them in a tin or iron box provided for that purpose.

b) They must not leave the building or grounds for any length of time without first notifying the principal, and during the firing season janitors in charge of steam- or furnace-heated buildings must not leave the premises during school hours for any purpose, and are not required to carry messages.

Rule 10. Janitors will report to the secretary at least five days before needing a supply of coal, and will send coal tickets to his office immediately at the close of the month.

Rule 11. The Janitors' Committee may remove or dismiss any janitor when in their opinion the interests of the schools over which they have charge require it, and no janitor so removed shall receive any compensation whatever from and after such removal or dismissal.

Rule 12. The principal of any school in which the janitor may be found intoxicated or in anywise incompetent for the discharge of his duties, shall be required to immediately notify the chief engineer of such incompetency.

Rule 13. Custodians are expected to pay strict attention to cleanliness of person and clothing and to so conduct themselves that they may command the respect of the pupils.

Book News and Reviews

State Publication of Textbooks

The Kansas Experiment

The publication of textbooks by the State of Kansas has not resulted in the enormous economies which were predicted for the state, and a legislative investigation, now under way has indicated that the plan which has been very highly praised involves certain shortcomings that have not been anticipated. The legislative committee has, up to the present time, received testimony that is extremely disturbing.

Mr. W. G. Clugston, writing on the plan in the *New York Times*, says that the experiment does not offer a possible escape from the evils of economic depression. He writes:

"In 1913 Kansas established a state printing plant and published its own schoolbooks. The idea was to get the people out of the clutches of the so-called 'book trust.' An elaborate plant was purchased and put into operation. A state schoolbook commission was created to select textbooks and see that they got into the hands of school children at the least possible cost. For nearly eighteen years this enterprise has been carried on, but complaints of parents over the increasing financial burden of buying books for their children, and the constant cropping out of stories about waste, extravagance, and inefficiency, if not of dishonesty, finally induced the legislature to create a commission to investigate.

"The commission has not yet made its report. It probably is only in the first stages of its activities, but such startling discoveries have already been made as would seem ample to cause the people to be cautious about schemes to put the state into various kinds of business.

Low-Cost Plea Won

"It is true that when Kansas first started printing books it was demonstrated they could be supplied at lower prices than publishing houses were willing to furnish them. This might be true today. Equally is it true that private publishers have from the start been antagonistic to the experiment, and have probably done much to hamper it. But no outside interest can be blamed for all the deplorable things that have been brought to light by the investigators.

"Parents and taxpayers generally have been victimized by the state officials in charge from almost every conceivable angle, according to sworn testimony. In the past ten years designated textbooks have been changed whenever an excuse could be found, in order, it was said, to prevent parents from passing on to young children books that were used by their older brothers and sisters. Prices of the most used books have been increased from 75 to 100 per cent, according to the testimony, despite declines in the cost of paper and printing materials. Plates and copyrights bought by the state have been discarded, with large stocks of newly printed books on hand, it was disclosed, in order that five-year royalty contracts might be made with publishing houses for new textbooks.

No Competitive Bids

"On the witness stand the state printer, who is also chairman of the Textbook Commission, admitted that he purchased all paper and material from one Topeka paper house without ever asking for competitive bids. Then E. L. Barrier, state budget director, testified that in one day, back in 1925, the state printer purchased approximately fifty carloads of paper, or nearly \$200,000 worth. Such quantities of certain kinds of paper were bought that the taxpayers have been paying storage on it ever since and a year's supply is still on hand. Frequent and large orders have been placed on the same basis ever since. At one time, it was said, the state printer bought 295 tons of binder boards, paying \$113 a ton for it, when, according to the budget director, material for better quality could have been bought in the open market for \$84 a ton. Also, he said, the state printer paid \$13.75 a

hundred for one lot of paper when as good a quality could have been bought for \$6.

Graft in Readers

"In 1916, it was said, Professor Searson, a leading educator in one of the state schools, was paid \$25,000 for the plates and perpetual copyrights of a series of readers for the state schools. The state then published these readers in large quantities. Educators said they were excellent texts, and it was expected they would be used indefinitely. But, in 1921, they were discarded and \$80,000 was paid in royalties to a publishing house for the five-year rights to a new series of readers. Pupils were no longer permitted to use old Searson readers they had bought, and the state sold to junk dealers, at waste-paper prices, nearly 100,000 new and unused copies, and the plates for the Searson readers were also sold for junk.

"At the end of the five years, according to the record, the textbook commission found it had nearly 100,000 unused copies of the new series on hand, mostly printed just a few months before, and under the pretext that these would have to be sold for junk if changes were made, a new five-year contract was made with the publishing concern for a consideration of \$70,000."

NEW BOOKS

The Promise of Youth

By Barbara S. Burks, Dortha W. Jensen, and Lewis M. Terman. Cloth, 500 pages. Stanford University Press, Stanford University, Calif.

What becomes of gifted children? Do they fulfill the promise of early childhood?

The present book is an account of careful studies of a group of especially gifted young folks who were originally studied in 1921 and 1922. The authors, who are trained psychologists and sociologists, have, in each case, shown the results of eight years of growth, education, and environmental influence upon these children. In each case retests of intelligence have been made and the entire intellectual, emotional, and social life of the subjects has been discussed in the light of the earlier studies.

The book is a remarkably valuable document.

Laboratory Course in Everyday Physics

By C. J. Lynde. Cloth, 222 pages. The Macmillan Co., New York, N. Y.

Broadly the field of elementary physics and specifically the requirements of the college-entrance board are covered in the first 49 experiments of this book. Twenty-six further experiments which are, in reality, tests of the efficiency of household devices—vacuum sweepers, ice boxes, motors, etc.—add interest and are of immediate practical value to the work.

Conduct Problems

By W. W. Charters, Mabel F. Price, and E. W. Beck. Five booklets, paper, 72 pages each. The Macmillan Company, New York, N. Y.

This series applies the workbook idea to character formation. The problems are interesting and

TEXTBOOK PRODUCTION IN THE UNITED STATES

A total of 80,189,935 textbooks were produced in the United States in 1929, and 39,696,158 pamphlets were issued for school use. The textbooks represented over 30 per cent of all books printed during the year, and the pamphlets represented 20 per cent of the total pamphlets produced.

During the year, 36,885,667 juvenile books were published, of which, undoubtedly, a large number was used for schools. The production of pamphlets for children amounted to 8,273,065.

typical, but there is no motivation, and no basic information on moral principles or precepts. Social expediency and personal satisfaction seem to be the only purposes of right dealing.

Exploring American History

By Mabel B. Casner and Ralph H. Gabriel. Cloth, 814 pages, illustrated. Harcourt, Brace & Co., New York.

The authors have centered interest upon nine main units in American history, presented in the form of 27 problems for study. The book is a complete expression of the problem and activity method.

Mathematics for Junior High Schools

Book One. By Leo J. Brueckner, C. J. Anderson, and G. O. Banting. Cloth, 370 pages, illustrated. The John C. Winston Company, Philadelphia, Pa.

Arithmetic for the seventh grade still contains, as a core, the topics of mensuration, insurance, percentage, profit and loss, as it did during the second half of the past century. Still the teacher of those earlier days would recognize only faint traces of these subjects as they are presented in this book. Throughout the work the applications to present-day life and to child interests are real; the exploratory function of the junior high school is constantly stressed; the work affords a natural introduction to algebra and geometry. It must be added that reviews and practice tests, problem scales, and other devices insure reasonable skill and sustained interest.

Workbook of The Science of Everyday Life

By Edgar F. Van Buskirk and Edith L. Smith. Paper, 224 pages. Houghton Mifflin Co., Boston.

This workbook, which is adapted to any introductory course in general science, has two distinguishing features: The units are divided into problems which permit of three levels of work—the essentials, optional problems where time and ability permit, and advanced problems for rapid workers. Secondly, science is presented as vital and dynamic, only a small part of which is touched upon in the required topics and problems. Encouragement is constantly provided for observations and studies initiated by the child himself.

Alpha Individual Arithmetic

Book 5, Parts I and II, 218 pages each. Ginn and Company, Boston, Mass.

The addition and subtraction of fractions are the especial subjects of study in Part I and division and multiplication are taken up in Part II. The books, developed by the supervisory staff of the Summit Experimental School, Cincinnati, Ohio, constitute basic texts and include workbook material. As a means of holding interest, the books contain a continuous story of the travels of two children from New York to the Pacific Coast. The problems and drill materials are built on travel incidents and geographic, economic, and social facts which the children encounter. Tests of the objective type are introduced at frequent intervals.

The Teacher's Relationships

By Sheldon E. Davis. Cloth, 416 pages. The Macmillan Company, New York, N. Y.

This well-balanced study discusses those professional and personal contacts and relationships which the teacher inevitably forms in the course of her work as an instructor of children, and as a member of the teaching corps of a school system. The study in reality is a statement of public-school administration and supervision and of public-school relationships as those viewed from the standpoint of a classroom teacher.

The book overemphasizes, we think, the direct relations of the school board with the teacher, except in rural schools. It somewhat underrates the relations of the superintendent and the teacher, but it is quite accurate as a statement of teacher and pupil relationships, and of teacher and parent relationships.

It is difficult to see how the average teacher, and especially the beginner, can benefit from a study of the problems of authorship. It would seem that the material in the final chapters might very well be replaced by suggestions for obtaining school publicity, particularly in rural districts.

Peter Makes Good

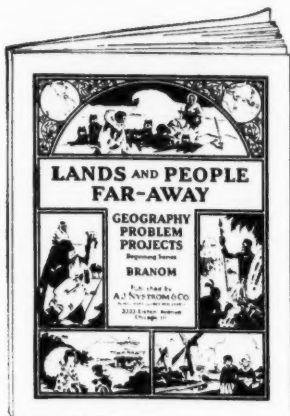
By Gertrude Thomas. Cloth, 187 pages. Published by Beckley-Cardy Company, Chicago, Ill.

This is a good dog story, followed by more dog stories. The loyalty, the intelligence, and the companionship of the dog is brought out in an interest-

(Continued on Page 90)

A New Nystrom Publication

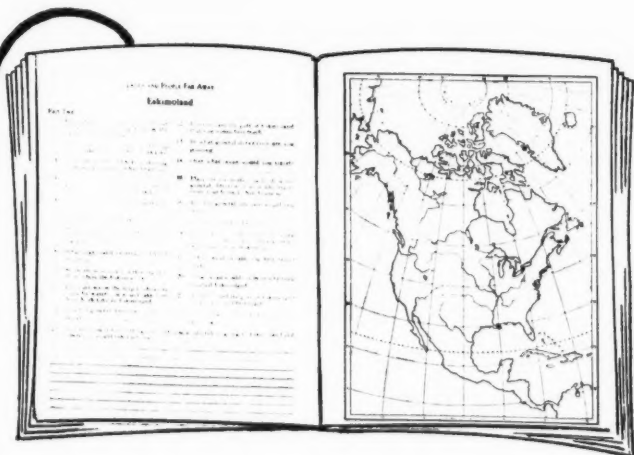
"Lands and People Far-Away"



A book of Geography Problem Projects arranged on the Workbook Plan

"Lands and People Far-Away" is the beginning of the series of Geography Problem Projects by Professor M. E. Branom, of the Harris Teachers College, St. Louis. This book is designed to be used with Book One of any series geography textbooks.

Send the coupon for sample pages.



"LANDS and People Far-Away" is arranged on the workbook plan, and provides correlated material ideally suited for use with any beginning geography textbook.

With this supplementary aid, pupils go beyond the covers of their textbooks—journey enthusiastically in spirit to distant lands. Simple exercises teach them how to use maps. Easy problem projects test their study and direct their activities.

Always abreast of educational developments in modern teaching methods, Nystrom publications are edited to fit in exactly with the workbook, unit fusion, problem-project and visual education plan of teaching.

If you teach or direct the teaching of Geography, send in the coupon. It will bring you interesting literature without cost.

A. J. NYSTROM & CO.

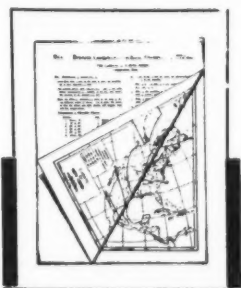
SCHOOL MAPS, GLOBES, AND CHARTS

3333 Elston Ave.

Chicago, Ill.



A typical page from "Lands and People Far-Away"—showing easy problems and projects to test pupils' grasp of study.



Free! Complete Project

We will send *free* to interested superintendents and principals, a complete problem project from The 60-page Problem Project Book by Professor M. E. Branom. Fill in and mail the convenient coupon.

A. J. Nystrom & Co.

3333 Elston Avenue, Chicago, Ill.

A6c

Please send me free, sample pages from Professor M. E. Branom's Geography Problem-Project Book "Lands and People Far-Away."

Name _____

Street _____

City _____ State _____

Position _____

School _____

Help them develop a Quality Character



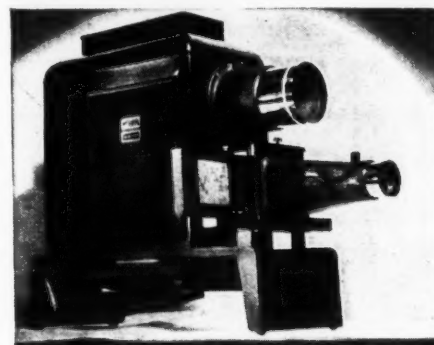
By furnishing Standardized Quality Papers. The most essential "tool" the student has, is Paper. Make sure it is of correct texture, finish, strength and color. Beautiful and well-equipped school buildings are tributes to the sound judgment of American fathers and mothers.

The quality and appearance of the Writing Paper is equally as important as the desks, lighting, laboratory equipment, gymnasium equipment, — therefore, specify recognized "character" papers and these are manufactured from pulp to printed package by KVP in the "World's Model Paper Mill."

KVP School Papers are distributed through legitimate wholesale dealers who can supply you with any of the following brands:

Glendale	KVP Bond	Career	Wolverine	"Red Bar"
Glendare	Clearscript	Prosperity	"The Guard"	Del Rio

Kalamazoo Vegetable Parchment Co.
KALAMAZOO - - - MICHIGAN



A Show at School

Lessons take on the thrill and interest of a show when they are presented with a Balopticon. Projected pictures, properly explained, are retained in the memory of the student. Lessons are really learned.

Bausch & Lomb make Balopticons for every schoolroom use. Slides, pictures, charts, strip film can all be projected with maximum clarity and brilliance.

Send today for complete literature on Balopticons for Schools. BAUSCH & LOMB OPTICAL Co., 673 St. Paul St., Rochester, N. Y.

BAUSCH & LOMB

(Concluded from Page 88)

ing way. The stories cover a series of situations and incidences, dealing with the tiniest pup to the heaviest police dog.

The book is embellished with 20 full-page colored illustrations drawn by Dorothy Saunders.

A Study of Values

By G. W. Allport and P. E. Vernon. Manual of directions, test, and score card. Houghton, Mifflin Co., Boston, Mass.

This test seeks to find and measure the dominant interest in six types of personality—the theoretical, the economic, the esthetic, the social, the political, and the religious.

The Outdoor Playhouse — Book Two

By Paul G. Edwards and James W. Sherman. Cloth, 176 pages, illustrated. Published by Little, Brown, and Company, Boston, Mass.

A nature reader for the second grade, in which the play interests and the natural curiosity of children are joined to bring home a considerable amount of information on important nature facts.

The New Examination

By J. F. Bursch and H. Meltzer. Paper, 89 pages. Southern School Depository, Los Angeles, Calif.

The construction of the "new" types of examination and their uses are presented in elementary form. A variety of samples from actual schoolwork are appended.

Models for Writing Prose

Edited by Roger Sherman Loomis. Cloth, 628 pages. Richard R. Smith, Inc., New York City.

These models of present-day English are intended for college use. Mostly, they represent the best present and recent taste and style. It may be seriously questioned whether public-school people have a right to destroy old ideals, religious beliefs, and important traditions by some of the selections included. If the purpose is to destroy prejudices and to enable the student to answer fallacies by contact with brilliant but destructive writing, the method hardly seems logical when it is remembered that those exposed to the material can hardly be competent judges.

Learning and Test Activities in General Science

By R. K. Watkins and R. C. Bedell. Paper, 184 pages. The Macmillan Company, New York.

This workbook is provided with unit tests to be used at the beginning and the close of each study unit.

Forest Facts for Schools

By Chas. L. Pack and Tom Gill. Cloth, 348 pages. The Macmillan Company, New York.

This study of trees, forests, wood, and other forest products affords a rather comprehensive view of the entire subject. Written for children in the upper grades, it takes up in five units the human and economic values of forests and trees, the principles of forestry, the lumber and other forest-product industries, and the preservation of forests.

When the authors present "forest facts," they write with interest and conviction; when they idealize the forest and cause the sequoia to speak as a person, they strike a false note that any clever American child will notice.

Wheels Toward the West

By Hildegard Hawthorne. Cloth, 243 pages. Published by Longmans, Green and Company, New York City.

Here is a story of the pioneer days in the West. It tells of the adventures of a boy and girl who start out from an eastern city, join a covered-wagon train bound for Santa Fe, and enjoy all the sights and scenes, together with the excitement, which the great West offers.

The two youngsters are captured by Indians, adopted by the old chief and wife and made members of their band. They are exposed to all the hardships, the adventures and fun which goes with that sort of life.

The book is embellished with pen-and-ink sketches which enliven the text and add to the attractiveness of a most interesting book.

Safeguarding the School Board's Purchase of Architects' Working Drawings

By A. M. Proctor. Cloth, 142 pages. Published by Bureau of Publications, Teachers College, Columbia University, New York City.

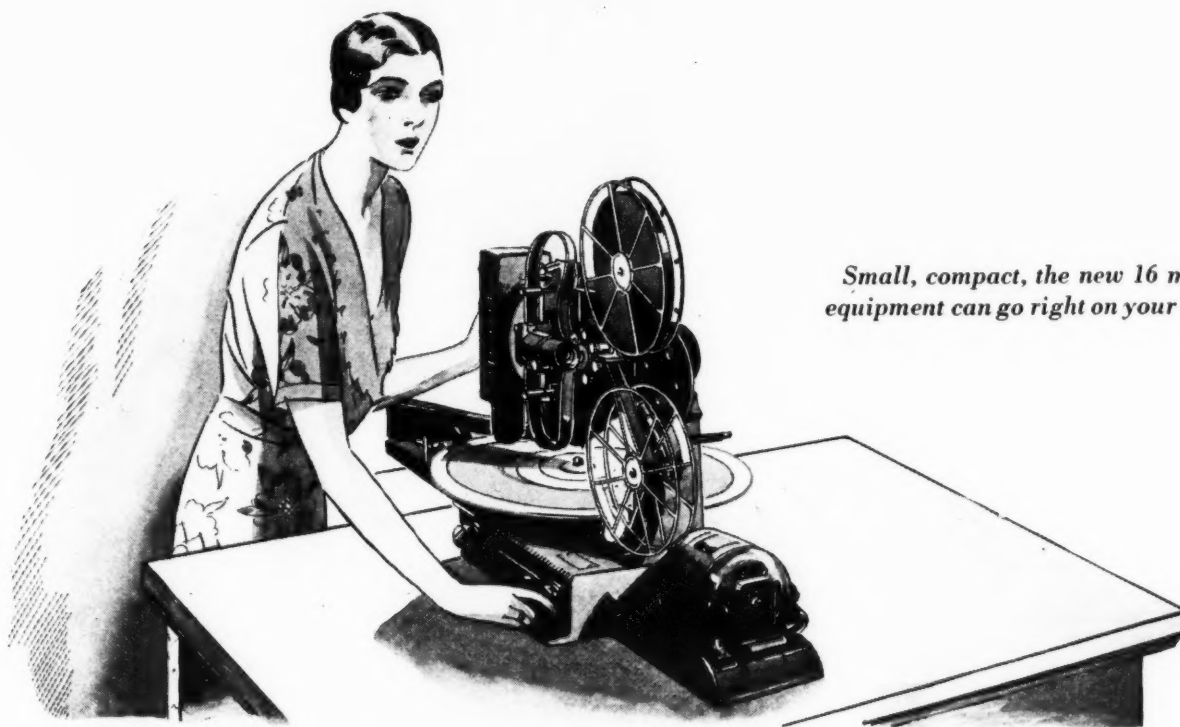
This book develops two closely related problems in school administration. The first is that of a mechanical check for adequate plans for school buildings so that boards of education may be certain that they will get in a completed building what they have asked for in the preliminary study of a project. In other words, whether the plans state completely, clearly, and without possibility of error all the essential details of construction, equipment, and finish that will make the structure a successful schoolhouse. The second problem is of broader import and relates to the policies and the machinery which the state should set up to insure the preparation and use of adequate plans for schoolhouses.

The author's technique of study is that of a careful analysis of 130 sets of architects' drawings of school buildings erected within the past decade. These drawings were obtained from a single state — Missouri — and the study as carried on revealed the defects of plot plans, floor plans, elevations, sections, framing details; details of such special portions of buildings as stairs, built-in equipment; plumbing plans, electrical plans, and heating and ventilating drawings. It is clear from the tabulations, which the author allows to tell their own story, that the architects fail most largely to properly detail engineering matters and those numerous especial items like blackboards, cabinets, etc., which make a schoolhouse especially fit for school use. Heating and ventilating details are generally omitted and are apparently left to the heating contractor to provide for himself. The author argues with wisdom that each set of plans should be so detailed that their cannot be room for dispute, omission of necessary items, or short cuts in cheapened construction.

The nine essential elements of a set of working drawings as suggested are:

1. A plot plan.
2. Floor plans, including foundations and footings plan and roof plan.
3. Elevation plans of all exteriors of the building and elevations of the walls of a typical room and such other special rooms as are necessary to make explicit all details of wall construction.

(Concluded on Page 92)



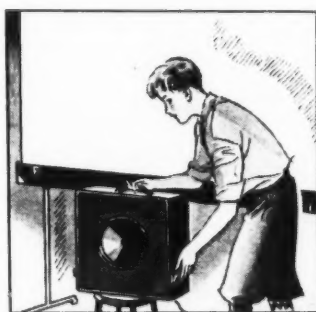
Small, compact, the new 16 mm. equipment can go right on your desk

Electrical Research Products *announces a* **16 mm.** **Western Electric Sound System**

TALKING PICTURES FOR THE CLASSROOM: Now, with the new 16 mm. equipment, educational talking pictures—which facilitate and enrich learning—may be shown in any classroom. Set-up in a few minutes, easily operated by the teacher, the 16 mm. is always ready for action.

FOR THE SMALL BUDGET: The low cost of this apparatus fits the budget of even the smallest school—and enables larger schools to use not just one but a number of equipments. Lower cost of educational talking pictures on 16 mm. film still further reduces expenditures.

WESTERN ELECTRIC QUALITY: The 16 mm. equipment



Easily carried from room to room

brings quality reproduction of talking pictures to the individual classroom. It achieves the same lifelike reproduction of sound and scene as the Western Electric equipment in 8,000 theatres throughout the world. Into the 16 mm. equipment has gone the same quality of design, material and workmanship that has made Western Electric the standard.

THE PERFECT COMBINATION: The educational talking pictures offered by Electrical Research Products and the new 16 mm. Western Electric Sound System are a perfect combination. Used to supplement regular teaching methods, they intensify and vitalize instruction, bringing a new teaching tool to the field of education.

Department of Educational Talking Pictures,
Electrical Research Products Inc.

Distributors of

Western Electric

EDUCATIONAL TALKING PICTURE EQUIPMENT

ELECTRICAL RESEARCH PRODUCTS, INC.
250 West 57th Street, New York, N. Y. ABS 9-31

Gentlemen—Please send me further information on the new 16 mm. equipment. Also on educational talking pictures, and how I can use them.

NAME

ADDRESS

CITY

STATE

... Be Sure Your BLACKBOARDS are ready for a year of school service!

INSPECT the Blackboards in your schools. Be sure your pupils can read from them without eyestrain. Be sure crayon marks can be made lightly, easily . . . and erased completely. Don't let gray, streaked, obsolete blackboard impede classroom progress. Consult with us on *all* your blackboard problems. Let us advise you about the replacement of your old blackboard. *A half century of blackboard manufacturing experience is at your disposal.*

Excellent Values in These Time-Tested Blackboards
Economy in price and the lowest maintenance cost of any blackboard on the market today applies equally to any of these three Blackboards.

STERLING LIFELONG BLACKBOARD— Recognized by many educators to be the best blackboard made. Known for its perfect writing qualities—and a surface that is free from irregularities, blemishes or imperfections. Easy to write on—easy to read from. A fire-resisting, cement-asbestos backing that no amount of service can break down. So perfect, it requires practically no upkeep expense. So sturdy, it gives exceptional performance for the life of the building.

VELVASTONE BLACKBOARD— This Blackboard, as its name implies, has a surface as smooth as Velvet. That means writing ease, smooth, easy, nonscratching. A super-strong, rock-like backing makes it indestructible. A durable *plus* blackboard, surprisingly economical.

OLD RELIABLE HYLOPLATE— A blackboard that for 50 years has met the needs of school boards compelled to practice stringent economies in purchases. A blackboard costing less, but giving astoundingly long and satisfactory service.

Replace obsolete, unsatisfactory Blackboards with any of these Blackboards. Satisfactory performance is guaranteed—backed by blackboard specialists who have had the confidence of educators for half a century.

Samples (cut right from stock) gladly sent FREE. Address Dept. S92.



WEBER-COSTELLO COMPANY

BLACKBOARD SPECIALISTS FOR 50 YEARS

Chicago Heights, Illinois

MAKERS OF STERLING LIFELONG BLACKBOARD, VELVASTONE, OLD RELIABLE HYLOPLATE, GLOBES, MAPS, ERASERS AND CRAYON.
55 Distributor Warehouses assure you immediate service.



(Concluded from Page 90)

4. At least two main section plans and such other sections as are necessary to show details, including sections of the auditorium, gymnasium, typical walls, stair wells, cafeteria, library and other rooms where special details of construction are involved.

5. A complete set of framing plans for buildings involving concrete or steel construction.

6. Large-scale detail drawings of all items of construction which cannot be clearly shown on the above drawings.

7. A complete wiring diagram and plan of electrical installations, including bells, telephones and radio installation.

8. Complete plumbing plans.

9. A complete plan of heating and ventilation showing all the details of installation of mechanical equipment.

As a practical means of insuring the completeness of the plans just suggested the author has worked out a checking schedule which any schoolman or school-board member may apply to a given set of drawings. This checking list is especially directed to reveal the educational adaptability of the proposed school plant, to avoid fire hazards, and to insure such completeness that extras and misunderstandings will be avoided. Useful as the check list is it does not provide more than a mechanical check on the essential elements of a plan. The responsible school official who uses it must necessarily check the plans against local and state requirements for construction, plan, and equipment. Above all he must bring to bear judgment and experience to harmonize the plans with the local educational program, the economic ability of the community, and good judgment on the adequacy of each of the architect's proposals for the use of materials, types of construction, standards of strength, etc., etc.

As an answer to the second problem—that of state control—the book outlines a series of state rules which, very wisely, are to be adopted by the state board of education in such form that modifications and even exceptions may be made. There is no question concerning the need of state control

over local school projects. Both school boards and architects of small communities need help to insure adequacy of buildings for the growing program of education and for the economic use of available funds. This help must come in well-defined standards of room types and sizes, in standards of construction, safety, and completeness, and in wise control over extravagance in the size of buildings, the use of expensive materials, and equipment. The state's assistance in any project cannot come too early—architects and boards need guidance from the outset, and the criticism and checking should begin when the first sketches are made and as the drawings are developed.

As the author says: "The development of varied and multiple school activities with the necessity for special rooms and special equipment has complicated the task of planning and increased the need of supervision of planning. Such supervision calls for standards in the form of regulations and requirements for working drawings. Such supervision will serve to safeguard the rights of the child to a building fitted to his needs and will safeguard the taxpayer by assuring him of the most economical expenditure of the funds he provided and by assuring him of the procurement of the highest possible return on his investment."

No state will perhaps accept all of the author's recommendations, but the outline as he has prepared it is a valuable starting point.

The book is a useful contribution to the working literature of school architecture.

Mathematics for Junior High Schools

Book Three. By Leo J. Brueckner, Laura Farnam, and Edith Woolsey. Cloth, 456 pages, illustrated. The John C. Winston Company, Philadelphia, Pa.

This first-year algebra has been arranged with junior-high-school objectives in the foreground. It is rather more simplified in treatment and easier in problem material than most older textbooks for this level, and leaves little to be done on the part of the teacher in the way of gathering illustrative materials, preparing tests, and developing review and drill exercises.

PUBLICATIONS RECEIVED

Information and Certainty in Political Opinions: A Study of University Students During a Campaign. By Harold S. Carlson. Bulletin No. 1, August, 1931, issued by the University of Iowa, Iowa City. It might reasonably be expected that college and university training would bear fruit in the cultivation of fair-mindedness. The extent to which this has actually taken place, however, may be quite a different matter, as the results of the study indicate. The principal result in the study consisted in the finding of a low correlation between total certainty and total information. The true relationship between certainty and information is best represented by means of a line graph showing the average amount of certainty accompanying various amounts of information. It was found that there is very little more relationship between estimated understanding and certainty than between actual information and certainty.

Research: Its Value to the Art and Industry. Paper, 28 pages. Issued by the research laboratory of the American Society of Heating and Ventilating Engineers, 51 Madison Ave., New York.

Certain Relationships Between Scholarship in High School and College. By Lena J. Hawks. Price, \$1.15. Issued by the Johns Hopkins University, Baltimore, Md. The study has resulted in a procedure for handling the high-school record, which has proved effective in bringing out relationships between scholarship in high school and college. The conclusions are that there exists a relationship between marks in individual subjects in high school and first-semester and first-year scholarship in college; that there is evidence of a relationship between marks in a nonacademic subject; and that for prediction there is no choice among the academic subjects. For predictive purposes, a record of the entire four years in high school is considered slightly better than a record of the last three years.

Salaries Paid School Administrative and Supervisory Officers, 1930-31, in 88 Cities Over 100,000 Population. Tabulations I-B. Issued by the research division of the National Education Association, Washington, D. C. Contains the salaries of associate, assistant, and deputy superintendents, business managers, chief attendance officers, head janitors, head nurses, secretaries to the board and superintendent, and directors, supervisors, and assistant supervisors of the special subjects.

Ditto

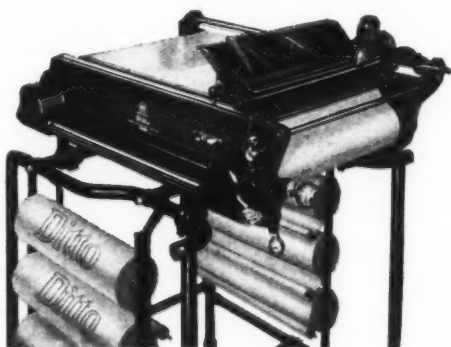


aids education and educational administration

Teachers and business executives of educational institutions acclaim Ditto as a great time-saver and a simplifier of classroom and office routine.

Ditto makes copies of anything typed, written or drawn, direct from the original without setting type, cutting stencil or carbon manifold. Several colors copied at once.

Tests, drawings, charts, music scores, examination questions, science tests, reports, payrolls, bulletins, card records, office forms,



all paper work connected with modern educational methods and office practice . . . Ditto makes short work of copying, never makes a mistake, saves time and effort.

A special book, "*Ditto for Schools and Colleges*," fully explains how Ditto aids instructors and school administration. You may have a copy free of charge. Write for it.



Ditto Incorporated
2275 West Harrison Street
Chicago, Illinois



The Kindergarten "Symphony" cuts loose

No wonder schools need J-M Sound Control Treatment

NOWHERE is quiet so essential as in a school. Yet nowhere do so many diverse activities create distracting and disturbing noise. When you realize that the noise in an average classroom reduces every student's hearing to 60% of normal, the need for eliminating unnecessary noise becomes apparent.

Noise confuses the brain—impairs accuracy—and dulls the senses. Don't allow noise to handicap the students under your care . . . save your teachers from the nerve strain and mental fatigue of working against detrimental and easily remedied sound conditions.

Noise in disturbing volume need no longer be tolerated in a school. Johns-Manville Acoustical Engineers—pioneers in developing methods of sound control—can eliminate this evil of noise in schoolrooms and corridors.

*Stimulates clear thinking—
reduces fatigue*

They have developed methods and materials which absorb noise to an extraordinary degree. New schools everywhere are applying Johns-Manville Sound Control Treatment. It can be applied at reasonable cost to modernize your present school building.

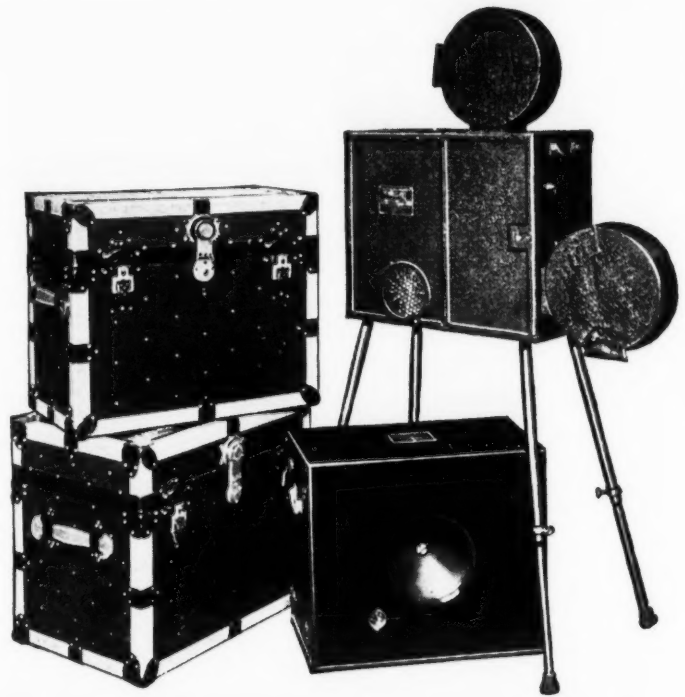
J-M Sound Control is a modern aid to education that every school official should investigate. Just ask our nearest office to arrange for a visit by our Sound Control Expert or write Johns-Manville, 292 Madison Ave., N. Y. C.



QUIET—and a distinctive ceiling as well. J-M Sanacoustic Tile provided both in this cafeteria in the Evanston Township High School, Evanston, Illinois. Hamilton, Fellows & Nedved, Architects, Chicago, Ill.

Johns-Manville

Sound Control Treatment



TALKING PICTURES

**CREATE A LASTING IMPRESSION
UPON THE MINDS AND
MEMORIES OF YOUR STUDENTS**

The value of the talking picture is based upon the fundamentals of education. Your students see—they hear—and above all, they remember. Prominent educators recognize the tremendous force of the talking picture, and its adaptability to the field of education.

PHOTOTONE PORTABLE TALKING PICTURE EQUIPMENT SOLVES VISUAL EDUCATION PROBLEMS

Phototone—the first really practical portable sound-on-film talking picture projector, offers you talking picture equipment of extreme simplicity, dependability, and of perfect tone quality. It is a machine built for the future. It uses standard 35 mm. film and is furnished complete with projector, amplifiers, speakers, and all controls. Easily moved from place to place, and set up, ready to operate in fifteen minutes time.

Write for full information.

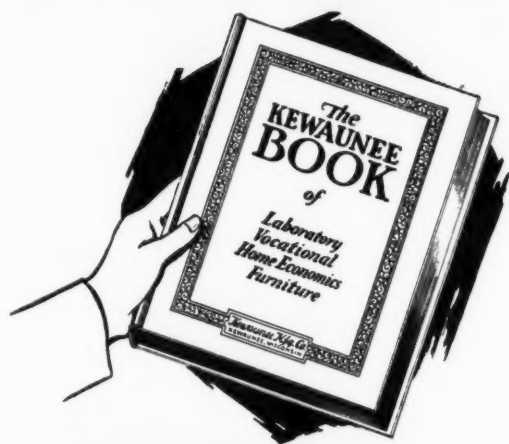
YOUR PRESENT PROJECTORS CAN BE CONVERTED INTO SOUND-FILM EQUIPMENT

If your school is already equipped with Powers or Simplex projectors, Phototone Sound-Film equipment can be attached and your present projectors converted into complete sound film equipment. Let us give you full information regarding this convenient method of change-over.

PHOTOTONE

SOUND FILM EQUIPMENT

PHOTOTONE EQUIPMENT CORP. OF AMERICA
309 N. ILLINOIS ST. INDIANAPOLIS, IND.



Write for the Kewaunee Book

It's the Buyer's Guide to technically, scientifically and pedagogically correct laboratory, domestic science and vocational furniture

Every member of the school board having Laboratory, Domestic Science, Vocational or Library Furniture to buy, should have the Kewaunee Book. It's the largest and most comprehensive book of the industry, picturing over 500 pieces of furniture and listing over 1500 pieces.

Kewaunee Furniture is constructed from the best materials throughout and every piece is technically, pedagogically and scientifically correct in every detail. Buyers for the largest schools in this country—men and women who go thoroughly into the merits of all equipment—are giving their orders to Kewaunee because careful comparisons prove Kewaunee Furniture by far the best investment.

Write for the Kewaunee Catalog. It will be sent to you, prepaid. If you require or desire the assistance of an expert Laboratory Furniture Engineer to help you decide what type of furniture your school needs, or what furniture should be added to make classes available to more pupils, write us. We will send the nearest engineer. There is no charge for his service.



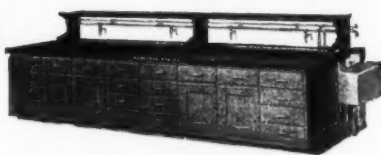
Library Reading Table No. 5143



Drawing Table No. L-2028



Domestic Science Table No. K-1776



Chemistry Table No. D-772

Kewaunee Mfg. Co.
LABORATORY FURNITURE EXPERTS

C. G. CAMPBELL, PRES. AND GEN. MGR.

Chicago Office
14 E. Jackson Blvd.

101 Lincoln St., Kewaunee, Wis.

New York Office
70 Fifth Avenue

Philadelphia
Greensboro, N. C.
Miami
Birmingham
Louisville
Nashville
Columbus

Lansing, Mich.
Adrian, Mich.
Indianapolis
Jackson, Miss.
New Orleans
Houston

BRANCH OFFICES
El Paso
Toronto, Ont.
Oklahoma City
Kansas City
Little Rock
Lincoln, Nebr.

Des Moines
Minneapolis
Grand Forks, N. D.
Aberdeen, S. D.
Denver
Salt Lake City

Phoenix
Los Angeles
San Francisco
Portland, Ore.
Spokane
Crystal Falls, Mich.
Montreal, Que.

Public-School Reserve Funds

"In public-school finance, a reserve fund may be defined as any sum of money collected during a given fiscal year or years and held for obligations anticipated or occurring in a succeeding fiscal year or years." This is the definition given to reserve funds in a suggestive study* on the subject by Dr. Frank C. Kelter.

The writer classifies the different forms of reserve as follows: (1) the interim reserve, (2) the building reserve, (3) the sinking fund reserve, (4) the insurance reserve, and (5) the contingency reserve. In discussing his subject the author begins by differentiating between reserve financing and borrowing. Here he says:

"If the alternative to establishing a reserve fund were the borrowing of an equal amount of money for the same period of time, there would be no differential in favor of either procedure, since the interest imputed to prior collection would be offset by the interest which would otherwise have to be paid on borrowings. But since borrowing, as a rule, will have to be resorted to only at a date considerably later than that at which the reserve fund must be established, and since the loans may be negotiated in amounts to reconcile with the successive monthly demands of the budget, the differential may be considerable in size unless it is offset by interest received from the depository. What the interest should be, entirely to offset the differential, must be determined for each particular case."

"The criteria which he sets up for evaluating reserve funds is set forth as follows: (1) The financial procedure should serve to keep the burden on the taxpayer to a minimum. (2) It should safeguard the public money. (3) It should promote ease of administration."

His conclusion on the interim reserve is that it does not satisfy the first criterion in that it does not hold to a minimum the burden of the taxpayer. It also fails in safeguarding public money, since it increases the amount of money on deposit at any one time. Finally he says:

"Judged in the light of the third criterion, ease of administration, its use is probably undesirable, although less strongly so than when judged by the first two criteria. It neither increases nor decreases the number of tax payments to be made, nor does it change the time of the payments. It neither introduces nor removes any problems in connection with the collection of taxes. It is even doubtful whether it demands more ability in administration than does credit financing. It is only in the matter of reconciliation of income with the budget demands that it occupies a somewhat less favorable position. Credit financing permits borrowing in the exact amount of needs; whereas, reserve financing cannot be so accurately carried on."

Advantages of Building Reserves

In estimating the advantages of building reserves he says: "Much can be said in defense of the building reserve plan for financing plant construction. Carried out in its entirety, the credit of the district is fully maintained. Again, it encourages economy, since the burden of paying for the building is borne prior to its construction, which tends to dampen unwarranted enthusiasm. Those who are responsible for the construction of a building are much more likely to embark on a too-ambitious program if the burden of the payment can be shifted to the next generation. Many communities are now laboring under the handicap imposed by the shifting of the burden of an extravagant program, or by the shifting of the burden of a sound program through the unwise scheduling of bond retirement. This has frequently so limited the borrowing power of districts that the only possibility of financing new construction is by means of building-reserve funds."

In bringing forth the objections, he mentions first the fact that public reserve funds are not, as a rule, wisely managed. "Another objection to the building reserve is that if the school board is limited in the creation of such a reserve only by the limits placed on the school-tax rate, the board becomes, in effect, the sole arbiter in the matter of

building needs. It has not infrequently happened that, when a contemplated bond issue for building purposes has failed to receive the approval of the voters, the board has retaliated by raising the tax rate to the limit and thus either acquired sufficient money to carry out the project or forced the voters at a later election to approve the bond issue in order to secure a reduction in taxes. Happily such a procedure is illegal in most states. Where it is not definitely illegal it appears contrary to the intent of the law. It seems probable that the requirement of public approval for bond issues was intended as much for the purpose of providing a check on such large expenditures as for the purpose of permitting public control of the use of credit."

Summarizing Insurance Reserves

In summarizing his observations on insurance reserves, Dr. Kelter says:

"A number of the large cities have adopted the plan of self-insurance by means of payments to insurance-reserve fund."

"There is no conclusive evidence as to the size of the city justified in adopting the self-insurance plan."

"There is no objective standard for the determination of the size of reserve fund which would constitute adequate protection in a specific situation."

"It is suggested that a district can safely assume the risk of self-insurance when the most costly building can be replaced, under a ten-year loan schedule, at a cost not exceeding 1 mill on the assessed valuation of taxable property annually."

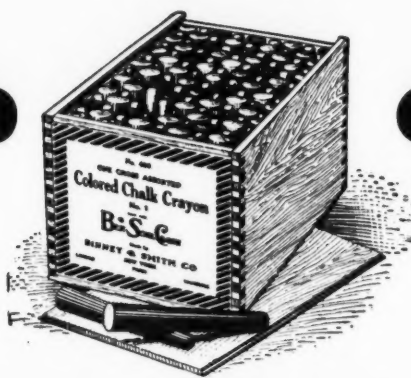
"Cities which are justified in adopting the self-insurance plan could and should meet the cost of fire losses without building up anticipatory reserves."

The sinking fund, the author holds, is no longer favored by economists and students of public administration. In some states, its employment in public finance is no longer legal.

"Even in theory, it is no cheaper than the serial or annuity bond, and, practically, it is almost certain to be more costly."

"As compared with the serial and annuity types

*Reserve Funds in Public-School Finance, by Frank C. Kelter, Ph.D., Teachers College, Columbia University.

COLORED**CHALK****CRAYONS**

B. & S. Colored Chalk Crayons is another well known Gold Medal product. Soft and smooth in texture with a wide range of brilliant colors, they are available in a number of grades in varying degrees of intensity. Packed in gross boxes in solid colors or any assortment as desired. Standard packing contains 16 colors.

BINNEY & SMITH CO.

MAKERS OF GOLD MEDAL PRODUCTS
41 EAST 42nd STREET, NEW YORK



Crayola Drawing Crayon
Perma Pressed Crayon
An-Du-Septic Dustless Crayon
Anti-Dust Blackboard Crayon

Atlantic White Chalk Crayon
B. & S. Colored Chalk Crayon
Artista Water Colors
Artista Poster Show Card Colors

of bond issue, it offers the least security for public funds. It necessitates the accumulation of a large sum of money which may be lost through dishonesty, misappropriation, or mismanagement.

"It requires closer and more expert supervision than does either of the two other types of bond issue. As a rule, only the larger cities can hope to secure the expert service required for its proper management."

The Contingency Reserve

The contingency reserve is not approved. The author says: "The contingency reserve does not satisfy the criterion of minimum burden on the taxpayer. The money is collected months, and even years, prior to the time of need. Only in the case of large expenditures which could not otherwise be financed without a bond issue is there any significant saving in the cost of administration, and it encourages extravagance and different business methods."

"The contingency reserve does not serve as the soundest method of safeguarding public funds. It increases the amount of money on hand at one time and is subject to all the dangers to which surplus public funds are exposed."

In discussing the legal provisions which now govern the reserve-fund phases in school finance the author says:

"Insofar as any general conclusions regarding the laws of the various states are justified, the conclusion may be drawn that the intent of the law is to make the establishment of reserve funds subject to the approval of the voters."

"There is much need for revision and clarification of school laws regarding the financial administration of schools. Where there is a tax-interim period there should be statutory provisions for the board to borrow in anticipation of taxes an amount sufficient for the interim period which is to be repaid upon the receipt of taxes."

"Subject to the approval of the voters, a tax levy for building purposes or building reserve established from other receipts should be authorized. The authority to issue bonds should carry with it authority to negotiate short-term loans either in anticipation of the issue of bonds or for a limited

period as the means of financing construction to be paid for in a short period of years. Boards, or other borrowing authority, should have considerable latitude in scheduling debt retirement, but the use of term, or sinking fund, bonds should be prohibited."

OBJECTIONS TO NIGHT FOOTBALL

The school authorities of Robinson Township, Ill., after some experimentation, have concluded that night football is not as desirable as day football. Principal E. A. May urges the following points against night football:

"1. Many boys live in the country and night practice would be very inconvenient for them. It would be undesirable for any group of students, all of whom should be at home for study and rest five nights per week. Some argue that many students are not at home nights and we grant the truth of this, but our school is not responsible for their being away from home nights except in a few unusual and extreme instances."

"2. Trickery and unfair practices of the game may not be detected so easily and hence the game may suffer in sportsmanship practices."

"The crowd and automobile traffic are more difficult to handle."

"3. Autos crowded with students traveling to or from a football game are always a risk but a much greater one at night than at day."

"4. The bands, the teams, the crowds, the colors, and cheerleaders, the thrilling spectacle of all these is somewhat removed. The spirit and thrill are less."

"5. The chill of the autumn evening atmosphere

A fully educated man is a man who can act effectively and think accurately and feel rightly. I should be false to my own deepest convictions, if I did not add that, in my opinion, no education can achieve these results, unless it is, in the truest sense, religious; that is, unless it rests on certain convictions as to the ultimate meaning and purpose of life. — J. H. B. Masterman.

makes attendance in the evening less comfortable than in daytime. Colds and prescription business should increase.

"6. Spectators must face strong lights. Aching eyes and headaches result. Business for the optometrists should increase materially."

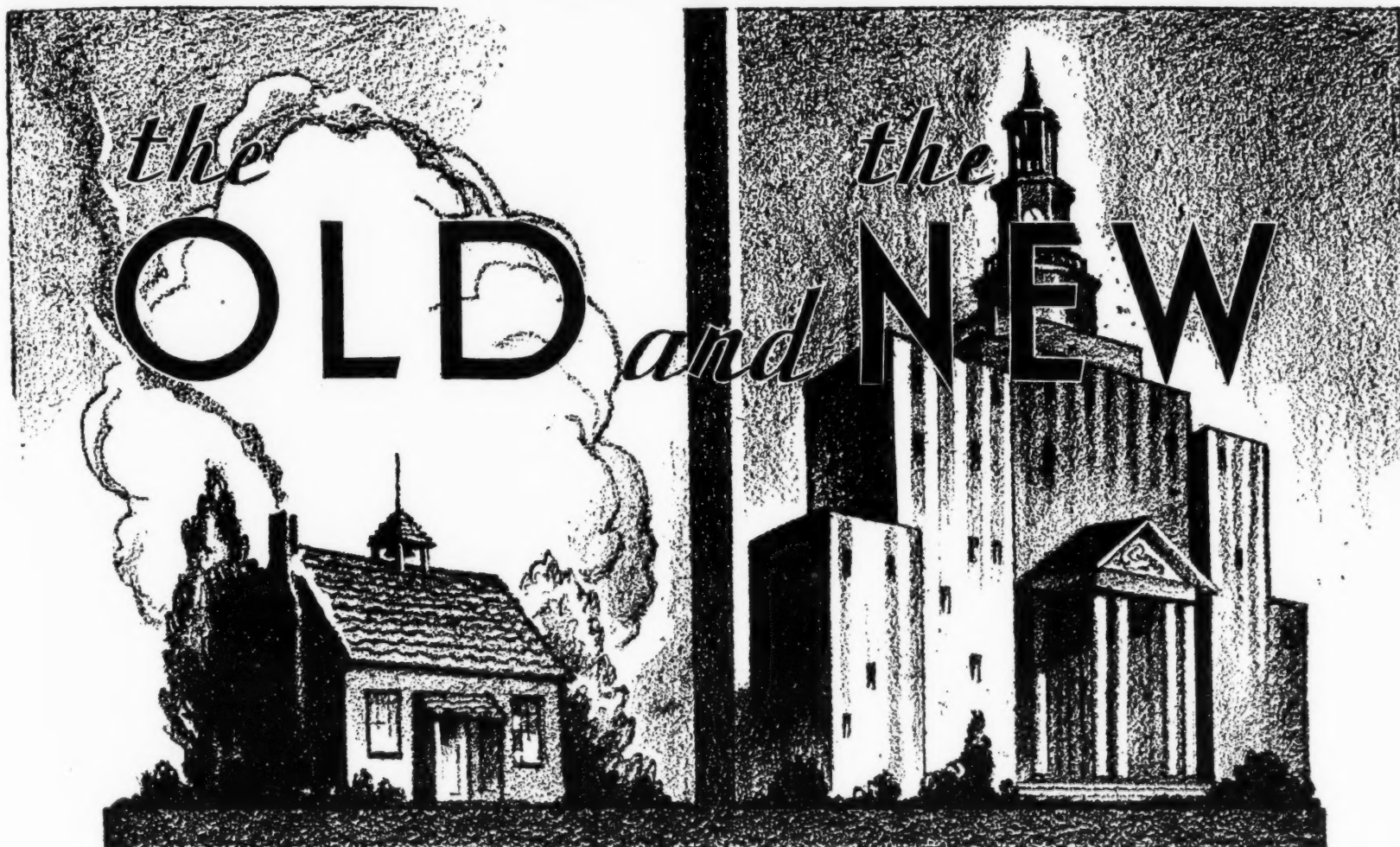
"7. A good set of lights require an investment of approximately \$3,000. It is not possible to play more than four and generally but three games at home at night. Such investment seems very great for 6 to 8 hours' use each year."

"8. Finally it must be remembered that school activities can be justified only as they are beneficial in training schoolboys and girls. No school is justified in launching any program as a commercial venture. Results must be the best obtainable for the boys and girls."

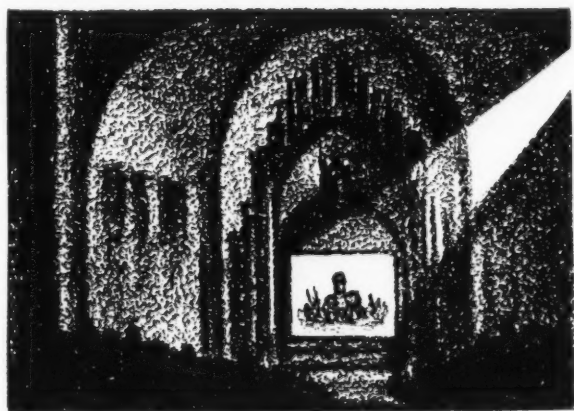
THE NORTH DAKOTA JANITORS' SCHOOL

A school for janitors was held June 22-26, at the North Dakota Agricultural College, Fargo, under the direction of Dr. P. J. Iverson, of the school of education. The school opened with an enrollment of 73 janitors and custodians, which was an increase of 41 over the number enrolled in 1930, when the school was first organized. The school regularly attracts janitors from the public schools of the vicinity, as well as custodians of public institutions where janitorial service is required on a large scale.

The school covered a period of five days and took up all the important problems of school janitorial work, including cleaning of floors and woodwork, care and operation of school heating plants, painting, buying and handling of fuel, school-ground care, repair of school equipment, and functions of the school janitor. Mr. L. O. Thompson, of St. Louis, performed an exceptionally fine service in the problem of cleaning, while Mr. Leslie C. Helm, of Minneapolis, gave valuable assistance in the classes devoted to the heating, lighting, and ventilation of school buildings. The remainder of the work was handled by local persons who were experienced in their special lines and who could teach it to the janitors in an efficient and satisfactory manner.



THE FABULOUS FORCES OF THIS ELECTRICAL AGE HAVE WROUGHT A MIRACLE IN EDUCATION



SIGHT and SOUND

The Great Teacher of Today and Tomorrow!

Executive Offices, RCA PHOTOPHONE, INC.

411 Fifth Avenue, New York City

Subsidiary of Radio Corporation of America



NO modern structure of learning can be conceived which does not include the greatest of all instruments of enlightenment and learning, the sound and talking motion picture.

Many of the nation's institutions—religious, educational, social—have adapted RCA PHOTOPHONE, the dominant Sound Reproducing Equipment, used in America's greatest theatres, and selected by the United States Army and Navy for all their activities on land and sea. Either for permanent installation or as portable apparatus quickly transforming hall, club, school or room into an auditorium, RCA PHOTOPHONE is the ideal equipment for the practical presentation of sound pictures, indispensable to this era of education. The product of the world's greatest electrical and acoustical engineering organizations, RCA PHOTOPHONE offers the utmost in *sound quality*...

The total existing acoustical knowledge, as worked out in the "birthplace of sound reproduction" is available to architects through the RCA engineers, who may be consulted by builders without obligation.

RCA PHOTOPHONE

A Challenge to the World in perfect reproduction of SOUND...IN PORTABILITY ... IN PRICE

The HOLMES Sound-On Film Portable Projector is available at a price within the reach of all.

\$675

The lightest, most compact, simplest to operate projector ever built.

HOLMES silent Projectors now in use can be equipped for sound-on film at small cost.



Weight
only
57 lbs.

The HOLMES needs no introduction. It is known and used the world over. Write for full information.

HOLMES PROJECTOR COMPANY
1813 Orchard Street, Chicago, Illinois

Durability is Essential!



SIMPLICITY and durability of construction are essential in a microscope when it is to be handled by the unskilled hands of students. The Spencer No. 64 Microscope is so built that it is practically fool-proof and will stand rough and tumble usage by students for many years.

This is but one of several reasons why it is the most popular of all Spencer Microscopes for use in botany, biology and zoology laboratories of high schools and colleges.

Folder M-32 gives complete details on why this Spencer No. 64 Microscope is definitely better for student use. Write for it today!

Spencer Lens Company
BUFFALO NEW YORK

School Law

INDIANA PERMITS NEGRO SEGREGATION

A school question that has been agitating the State of Indiana for some years — whether school commissioners are empowered to segregate Whites and Negroes under the law — was upheld recently by the Indiana supreme court. It was a specific case at Gary, Ind., about three years ago which resulted in a strike of the students at Emerson High School when a Negro girl was admitted as a freshman.

In an opinion written by Justice Walter E. Treanor, the court upheld William Wirt, superintendent of Gary schools and a member of the state board of education.

In December, 1927, Wirt was the target of a mandate suit filed by Richard Cheeks, Negro, in behalf of his daughter, who had entered the high school. Shortly after her entrance, pupils struck. On Wirt's orders, she was directed to attend another school in Gary, which had a two-year high-school course. After that she was to have gone to Froebel High School.

The mandate suit, filed in circuit court and transferred to another county, charged discrimination and set out that the girl was deprived of privileges, including athletic facilities.

In his opinion Justice Treanor said the athletic side of school life was nonessential and that the girl had not suffered from the lack of educational instruction or facilities. He quoted an 1877 Indiana statute setting out that color can be considered as a qualification for guidance of school authorities in the establishment of Negro schools.

RURAL SCHOOLS WIN DECISION

That a school district through its officers is exempt from the results of what, in an individual, might be termed carelessness and negligence, was the successful contention of three rural-school districts of Twin Falls county, Idaho, in their suits to recover funds from three local banks in a case of alleged forgery.

The banks, on the other hand, contended that the county auditor was in point of fact, through the operation of the statute, the duly constituted agent of the districts; that through carelessness and negligence he was responsible for the losses which the districts alleged.

The civil case grew out of the alleged forgery of orders for warrants drawn on sixteen districts, each of which was cashed by one of the defendant banks during a period of four years beginning in 1926.

Under the Idaho statutes, funds belonging to rural schools remain in the possession of the county superintendent of schools, and these funds must be disbursed by warrants drawn by the county auditor upon the written orders of the districts. The warrants are subsequently paid by the county treasurer. The orders for the warrants are signed by the chairman and clerk of the board, and countersigned by the superintendent of schools. After the warrants are drawn, the county auditor is required to return the canceled order to the clerk of the school district, making such returns at regular and specified periods.

In the case considered, an employee in the office of the superintendent of schools was alleged to have forged the names of district chairmen and clerks, used the rubber stamp indorsement of the superintendent, and presented the orders at the bank, taking the cash thereon.

According to custom, banks accepted the properly executed orders, presenting them to the county auditor and receiving warrants. During the indicated period, \$15,000 was drawn from the funds of sixteen districts.

In the civil suits following the criminal action, each of the three test cases was decided in favor of the districts. One bank, the First National Bank of Twin Falls, settled in full the suit brought by the Shamrock School District; another bank, the Twin Falls National Bank, appealed the suit brought by the School District No. 27 of Twin Falls, to the supreme court which affirmed the decision of the lower court.

The third bank, on their contention that certain important points of their case (Melon Valley

School District vs. Twin Falls Bank & Trust Company) had been ignored in the decision of the district court, has been granted a second hearing, now set for the September term.

RECENT SCHOOL LEGISLATION IN PENNSYLVANIA

State Supt. James N. Rule, of Pennsylvania, has just issued a preprint of an article in the *Pennsylvania School Journal*, which acquaints school officials with the educational legislation approved by the governor during the 1931 general assembly.

Section 401 on cafeterias gives boards of school directors in any school district power to establish, equip, maintain, and operate cafeterias in schools under its jurisdiction, and to appoint such directors, supervisors, or other employees as are necessary and fix their salary. A separate cafeteria fund must be kept, with all payments from the fund made upon the special order drawn by the school employee authorized. All accounts are subject to audit by the auditing committee of the school district.

Under Section 616 the responsibility of the state council of education in preparing and furnishing plans and specifications is limited to school buildings containing not more than four classrooms.

Section 621 repeals the former section of the school code relating to standards for heating and lighting. The state council of education must establish proper standards for heating and ventilating every school building and must prescribe the rules and regulations to make such standards effective.

Section 1019 and 1020 of the school code give authority to the state superintendent to investigate the financial records of any school district and to confer upon the state superintendent the same powers as are now conferred by law upon the school auditors in auditing the finances of the school districts.

Sections 1101, 1102, 1103, and 1141 increase the qualifications for the office of superintendent, associate superintendent, and assistants by requiring completion in a college or university of a graduate course in education approved by the state council of education.

This Roomy, Compact Unit Saves Space, Money and Work



THIS practical desk will interest those educators who believe in compact, flexible, economical classroom seating. Because it combines desk and chair in one, this unit increases classroom capacity. It entails no expensive installation, is easily moved about for rearrangement of classes or for sweeping and cleaning. The top is purposely made of solid wood, instead of veneer, to prevent marring and chipping. Note how the standard which supports the desk shelf is curved out to permit more leg freedom and induce better posture. In every respect this Movable Chair Desk meets the most rigid requirements of modern classrooms. If desired, a roomy storage drawer, which fits under the seat, may be secured. Inkwells for the desk top are also available. Ask your nearest H-W Sales Office for detailed information on this and other modern school desks.

SALES OFFICES

Baltimore, Md.	New York, N. Y.
Boston, Mass.	Oklahoma City, Okla.
Buffalo, N. Y.	Philadelphia, Pa.
Chicago, Ill.	Pittsburgh, Pa.
Dallas, Texas	Portland, Oregon
Houston, Texas	San Antonio, Texas
Los Angeles, Calif.	San Francisco, Calif.
	Seattle, Wash.

HEYWOOD- WAKEFIELD

AN UP-TO-DATE PHYSICS LABORATORY

equipped by Kimball with generous provision for apparatus, note books, etc. Each table has gas and electricity conveniently located for student's use. With all tables facing the lecture desk, at the front of the room, this arrangement is ideal for other science and class room work, when not used by the physics class.

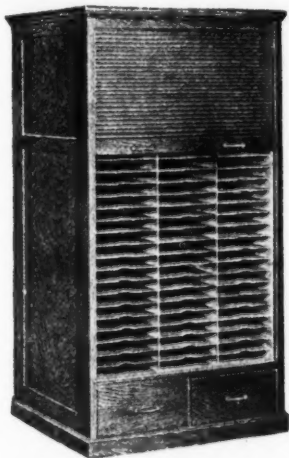


No. 680—with locks—wood top

No. 680A—with stone top

Our new book on *Laboratory & Vocational furniture* is now ready for distribution. If interested send for a copy.

A. E. KALTENBRUN
Director of Sales



No. 955 Note Book Case



No. 990 Apparatus Case

W. W. KIMBALL CO.

Laboratory & Vocational Furniture Dept., Wabash Avenue at Jackson Boulevard, Chicago

Eastern Salesroom, 105 W. 40th Street, New York

SCHOOL LAW

School-District Taxation

The directors of a school district may correct the record of proceedings had at a previous meeting to make a record speak the truth. — Peter v. Kaufman, 38 Southwestern reporter (2d), 1062 Mo.

School-District Property

A county board of education could obtain liability insurance on a transportation bus (Ala. school code of 1927, §§ 96-137). — Hughes v. Hartford Accident & Indemnity Co., 134 Southern reporter 461, Ala.

A student in class studying oxyacetylene welding was held entitled to recover from a school district for an instructor's negligence in furnishing an improper oxygen gauge, causing an explosion, without meeting the requirements of the statute as to notice and knowledge of the defect by the school district (Calif. statutes of 1923, p. 676, § 2; Calif. political code, § 1623, as amended by the Calif. statutes of 1923, p. 298). — Maede v. Oakland High School Dist. of Alameda county, 298 Pacific reporter 987, Calif.

School-District Taxation

Money in the city treasury, obtained from the sale of school property, was held not available to the board of education for the construction of a new building not approved by the common council of a city of second class (Wis. statutes of 1929, §§ 40.50 to 40.60). — State v. City of Racine, 236 Northwestern reporter 553, Wis.

As regards the power to impose a school tax, the board of education of a city of the second class is merely an arm of the city government (Wis. statutes of 1929, §§ 17.12, 17.26, 25.05 (2), 40.50 to 40.60, 62.22 (2) (c), 64.10 (3), 67.04 (2) (b)). — State v. City of Racine, 236 Northwestern reporter 553, Wis.

School-District Claims

In an action for injuries sustained by a student in a chemical experiment, a general charge of negligent omission, without averments of details, was held to entitle the plaintiffs to an application of *res ipsa loquitur* doctrine. — Damgaard v. Oakland

High School Dist. of Alameda County, 298 Pacific reporter 983, Calif.

As regards *res ipsa loquitur* doctrine, allegations in an action for injuries sustained by a student in a chemical experiment, were held, in substance, a charge of general negligence. — Damgaard v. Oakland High School Dist. of Alameda County, 298 Pacific reporter 983, Calif.

As regards the applicability of *res ipsa loquitur* doctrine, in an action for injuries sustained by a student in a chemical experiment, the defendants' sweeping denials of any negligence were held to cure any infirmity in a complaint in charging specific negligence. — Damgaard v. Oakland High School Dist. of Alameda County, 298 Pacific reporter 983, Calif.

The *res ipsa loquitur* doctrine was held applicable, where a student sustained injuries in a chemical experiment. — Damgaard v. Oakland High School Dist. of Alameda County, 298 Pacific reporter 983, Calif.

Teachers

A teacher refusing a request of a county health officer and school authorities to remain away from school until he recovered from smallpox was held subject to discharge (Miss. code of 1930, §§ 835, 6573). — Overstreet v. Lord, 134 Southern reporter 169, Miss.

Pupils

A pupil's intentional refusal to observe the board of education's rule because of a parent's command constitutes "insubordination," within the statute respecting suspension or expulsion (N. Dak. complete laws of 1913, § 1251). — Stromberg v. French, 236 Northwestern reporter 477, N. Dak.

LAW AND LEGISLATION

A state prohibition against Bible reading and instruction in the public schools is not violative of any provision of the Federal Constitution or the Declaration of Independence, according to a brief of Attorney General John H. Dunbar, of Washington, filed with the Supreme Court of the United States, opposing a review by the court of a case involving this question.

The attorney general, in his brief, held that the appellant's reliance upon a claimed conflict with the Declaration of Independence was frivolous. He held that this document did not have the force of organic law, neither did it guarantee the right of the appellants to have the Bible read and studied in the public school.

A question on the validity of a contract entered into between a board and a principal of a state graded school, was recently brought to the attention of the Wisconsin attorney-general's department. The contract was signed by three members of the board and the teacher, in which it was agreed that each party to the contract might terminate the contract by giving the other party thirty days' notice. In this case, a contract had been entered into in March last, but later circumstances arose which induced the board to exercise their privilege of notifying the principal that he must consider his contract cancelled.

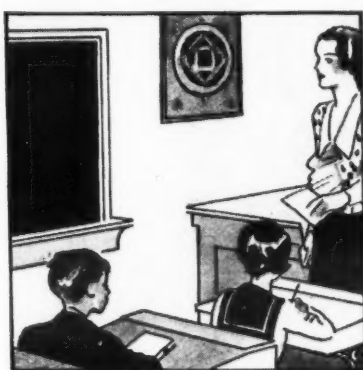
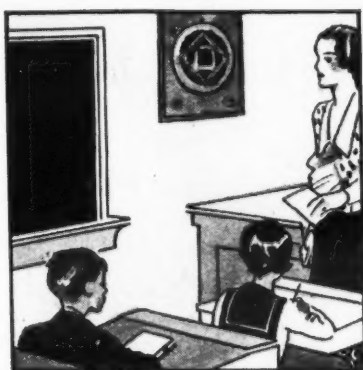
The state department of public instruction ruled that the clause inserted in the contract of a teacher or principal is of no force, and consequently the effort on the part of the board to cancel the contract is null and void. The ruling was based on the ground that the board is already clothed with authority to dismiss a teacher for cause and therefore the thirty-day clause was unnecessary and without force.

A new law enacted by the legislature of Connecticut does away with the term "school committee" as applied to school boards throughout the state. Hereafter such bodies will be designated as "boards of education." The change is one in name only and does not affect the prerogatives and responsibilities of the body.

School districts of North Dakota are not liable for injuries arising out of the operation of busses for school children, according to a decision of Assistant Attorney General Harold D. Shaft. The attorney held that school boards have the power to require bus drivers to carry liability insurance covering their personal liability, but they are not compelled to do so.





A teacher "conducts" a symphony



... in many classes at once

Schools anywhere can have music *any* time of day. A teacher's hand instantly fills any number of classrooms with the tones of a great orchestra via the Western Electric Music Reproduction System.

This equipment operates for a few  cents an hour, playing standard records, amplifying to the degree you wish and delivering the music in faithful rich tones. The high quality of reproduction shows that this apparatus has been made to Bell  System standards by Bell telephone makers.

GRAYBAR ELECTRIC CO.
Graybar Building, New York, N. Y.

ASB9-31

Gentlemen: Please send us illustrated booklet
on the Music Reproduction System.

NAME.....

ADDRESS.....

CITY.....

STATE.....

Western Electric

PUBLIC ADDRESS AND MUSIC REPRODUCTION SYSTEMS

Distributed by GRAYBAR Electric Company



CURIOSITY—is often the cause of serious accidents. When "curiosity" commands, children will follow. Even across dangerous highways.

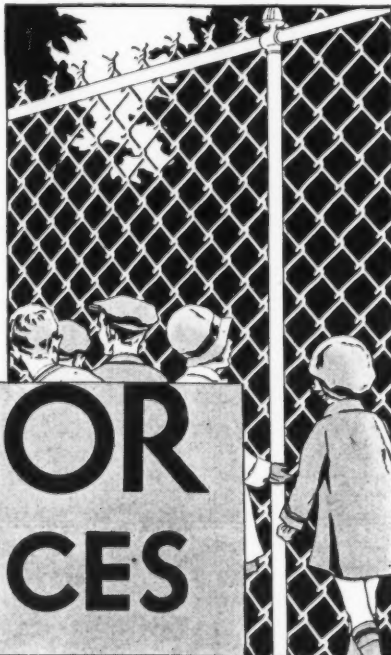
Curiosity cannot be controlled, but children can be kept within the bounds of safety.

An Anchor Fence is truly the Guardian of a playground: with an Anchor Fence racing feet are kept within its boundaries and safety is enforced.

An Anchor Fence Representative is located near you. Just phone or write and his services will be placed at your disposal. Or, send for a catalog.

ANCHOR POST FENCE CO.
Eastern Avenue and Kane Street
Baltimore, Maryland

Albany Boston Buffalo Charlotte
Chicago Cincinnati Cleveland Detroit
Hartford Houston Indianapolis
Los Angeles Mineola, L.I. Newark
New York Philadelphia Pittsburgh
San Francisco St. Louis Shreveport



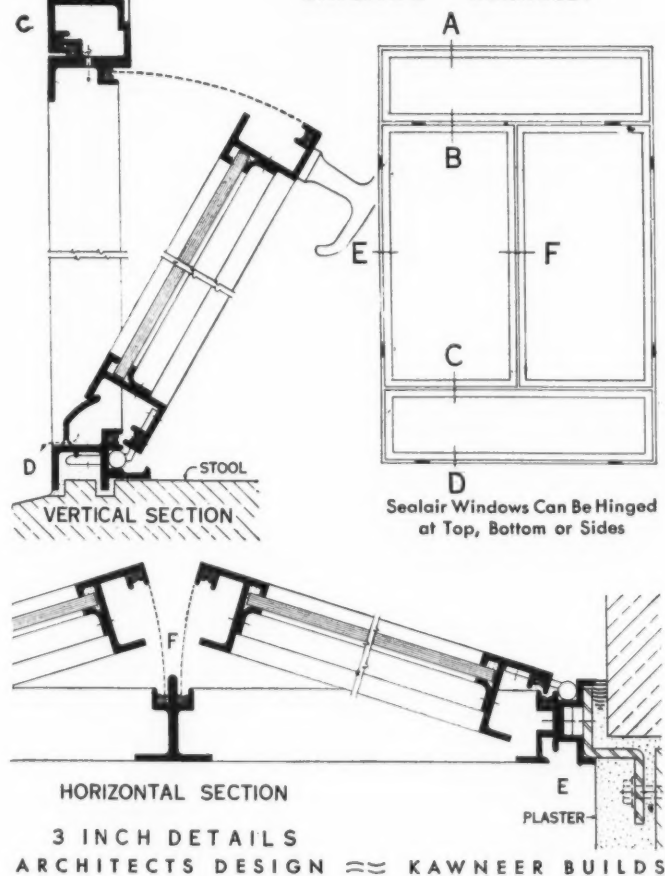
A VERSATILE WINDOW CONSTRUCTION

*Out-swinging
In-swinging
or a combination
of both*

In selecting the proper window, consider the advantages of Sealair. The three-point contact weather-proof feature alone marks this window as outstanding. Ventilation is controlled with specially hinged in-swinging and out-swinging sashes, and washing of the exterior is accomplished from within... WE GUARANTEE THIS WINDOW TO BE WEATHER-, DUST- AND RATTLE-PROOF. A wide variety of types can be furnished in extruded Bronze or Aluminum Alloy. Information and full-size details furnished on request.

Side-Hinged
to Swing Out

THE
Kawneer
COMPANY
NILES, MICHIGAN
FACTORIES
NILES • CHICAGO HEIGHTS
CHICAGO • BERKELEY



Penn State's NEW BUILDINGS



Architect—Chas. Z. Klauder, Philadelphia, Pa.



At left, "Old Main"; above, Mineral Industries Bldg. and Varsity Hall; at lower right, Recreation Bldg.

MANY alumni who see this will recall affectionately dear "Old Main" at Pennsylvania State College, one of many buildings completely rebuilt, which, with new ones in the fine State group, are equipped throughout with Halsey Taylor Drinking Fountains. Public and parochial schools, colleges, normal schools—all find these health-safe fountains "the specification for sanitation" . . . The Halsey W. Taylor Co., Warren, Ohio . . . See Sweets', 16 pages.



In a Halsey Taylor fountain the stream is automatically controlled and always uniform.



HALSEY TAYLOR Drinking Fountains

TWO-STREAM PROJECTOR—AUTOMATIC STREAM CONTROL

WHY PRINCIPALS DO NOT TEACH

At Ashland, Ky., the question why school principals do not take their place as teachers in the classrooms, has been raised. Supt. J. D. Falls has come forward with a list of duties which come within the province of the school principals as follows:

- To supervise janitors and report to superintendent monthly on same.
- To designate the use to which buildings may be put during school hours.
- To be responsible for the upkeep and use of playground and athletic equipment.
- To supervise toilets, corridors, lunchrooms, and other parts of the building.
- To keep the building neat and clean in appearance.
- To plant trees and shrubbery and to care for grounds in general.
- To keep check on property connected with the building.
- To keep inventories of supplies and equipment.
- To keep records of all supplies delivered to him.
- To recommend the disposition of all worn-out supplies.
- To make requisition for all instructional and janitorial supplies.
- To see that the proper amount of time is devoted to extraschool activities.
- To make report to the office of the superintendent of all receipts and disbursements of all school monies handled during the year, including plays, picture shows, cafeteria, athletics, libraries, clubs, etc.
- To formulate a vision and policy for the school.
- To supervise instruction through visiting of classrooms, and a testing program.
- To serve as agent or representative for the school.
- To be custodian of school and all its equipment.
- To be head disciplinarian of the school.
- To check and file permanent records of pupils.
- To keep correct records of all expenditures.
- To see that records of all supplies are kept.
- To make and keep records and reports of all activities.

To report to office of superintendent each semester.

Failures, promotions, teachers' marks, and the like.

To become personally acquainted with the pupils, as far as possible.

To see that they are properly classified.

To advise them as to courses and curricula.

To make all conditions conform as far as possible to the needs of the pupils.

To inspire, as far as possible, all pupils to push forward.

ALPHA PHI SIGMA

Byron Cosby, Kirksville, Missouri

Since the establishment of the honorary scholarship fraternity, Phi Beta Kappa, in William and Mary College many years ago, nearly every administrator in college or university has been in agreement in sponsoring and trying to develop scholarship organizations.

Today we have many divisional honorary scholarship institutions in our colleges. In the development of the honorary scholarship-fraternity idea no one seems to have been interested in doing anything for the student in this direction during his first two years in college.

If scholarship has value in itself, it seems that the ideals should be established under as attractive plans as possible much earlier than the senior college. The initiative and the beginnings of scholarship are usually found in the secondary school, and whatever initiative, skill, or advancement in this direction a student may have gained in the secondary school should be continued and emphasized immediately upon reaching college.

Alpha Phi Sigma encourages every high-school boy and girl in the ideal of scholarship by offering to the students in the secondary schools, a certificate on graduation to the salutatorians and valedictorians, which authorizes immediate initiation in the order upon matriculation in the college where a chapter exists.

This organization helps in orientation and also in preserving and developing the beginnings of interest in scholarship. It offers a basis for grouping com-

mon interests, without in any way interfering with any other organization. In the group where the fine ideals of scholarship are found, other fine ideals have the opportunity of developing and growing.

The first chapter was established, February 26, 1930, in the Northeast Missouri State Teachers College at Kirksville, Mo. Since then, chapters have been organized at Warrensburg and Maryville, Mo., Farmville and Fredericksburg, Va., Cullowhee, N. C., and Huntsville, Tex.

Even though the organization is very young, we have evidence showing that the idea is attractive to the freshman college student. Even with little publicity it has been found that our enrollment in the class of salutatorians and valedictorians is a much larger percentage than in preceding years.

The students are very enthusiastic, because it gives them a chance to capitalize their secondary-school endeavors and to enter immediately into membership with a well-organized group of college students, whose ideals appeal to their parents and friends.

The organization should in no way interfere with the standard senior-college organizations. It merely means that the boy or girl who has found the ideal of scholarship in secondary school is encouraged to continue the ideal in junior college, and even on through the graduation.

He will find a greater interest in the other divisional scholarship groups, and he will immediately have a greater interest in trying to start the ideal in secondary schools. Where the idea has been presented it has received very fine support, and we believe that it is one of the fine orientating schemes, as well as giving publicity to finer college ideals.

♦ North Providence, R. I. The school board recently received a report on the result of a summer round-up campaign for preschool children. Under the plan, children about to enter the schools in September were examined for physical defects. The report showed that a majority of the children examined were suffering from defective teeth which are in need of immediate treatment.

A Study in Pupil Costs of Buildings

(Continued from Page 40)

We are now ready for the real object of our study; namely, the pupil costs. In this portion of the study the data for utilization shown in Table I are converted into dollars and cents, and the results presented in Table II. The first necessary datum for this table is the number of cubic feet in each room, and this has been entered in column 2. The "Total Cost" of each room (column 3) was obtained by multiplying the cubical contents of the room by 40 cents, the cost per cubic foot of the building. In column 4 is shown the "Basic Cost" per pupil of each room. This item represents what the cost to each pupil would be if the room were being used to its full capacity, and was obtained by dividing the "Total Cost" by the period capacity. For example, in Room 10 we multiply 8,190, the number of cubic feet in the room, by 40 cents, thus obtaining the product of \$3,276, the "Total Cost" of this particular room. This product (\$3,276) in turn divided by 40, the period capacity, gives us \$81.90, the "Basic Cost" per pupil of the room.

While in column 4 we have seen an ideal situation in pupil costs, in column 5 we shall see the situation as it actually exists. In order to illustrate this item, let us again take Room 10 as an example. It will be seen from Table I that the weekly use of this room is 924. By dividing 924 by 30, the number of periods in a school week, we obtain 30.8, which represents the average number of pupils in the room at every period. This quotient (30.8) in turn divided into \$3,276, the total cost, gives another quotient of \$106.36, the "Actual Cost" per pupil of Room 10.

This being an important feature of our study, it is well to call attention to some of the "actual costs" as they occur in the table. The room costing least per pupil on the basis of the capital invested is the study hall. Here the cost is only \$74.39. The greatest cost occurs in the auditorium, amounting in this case to \$1,011.11. Among the regular classrooms, Room 29 shows the lowest cost, \$91.70; and Room 27 the highest, \$467.74. Since the latter room is used partly as a science laboratory, it may be expected to vary from the usual run of classrooms.

Some interesting comparisons may be made from a study of these pupil costs. For example: The cost of the gymnasium is more than four times as great as that of the least expensive classroom — Room 29. The cost of the cooking

room is more than six times as great as that of the least expensive classroom, and the cost of the auditorium is more than ten times that of Room 29. If now we compare Room 18 with Room 29, we have an interesting comparison of pupil costs of subjects. The former room is used for eighth-grade English and the latter for eighth-grade arithmetic. Since the "actual cost" of the former is \$214.11 and the latter \$91.70, English may be said to be costing almost three times as much per pupil as arithmetic. In the same way the cost of ninth-grade Latin may be compared with that of eighth-grade arithmetic. Room 20, the room used for Latin, shows an "actual cost" of \$152.52, almost double the cost of Room 29.

The average "actual cost" of all the classrooms is \$127.23, and of the special rooms, \$432.56. Rooms used exclusively by the seventh grade cost on the average \$103.84 per pupil; those by the eighth grade, \$132.89; and those by the ninth grade, \$209.45.

The "Loss" indicated in column 5 is simply the difference between the "basic cost" and the "actual cost" of each room, and is used as an opportunity for showing the amount of loss to the taxpayer on his investment. It is assumed that if every room of the building were being used to the limit of its capacity, the taxpayer would be getting full return for the cost of the enterprise. Of course, such an ideal situation never exists in actual practice, but nevertheless it gives us a convenient method for making comparisons.

Some interesting facts may be noted from a study of this item "Loss." In the first place, attention is called to the fact that the smallest "loss" occurs in the study hall, where it is only \$5.25 per pupil. Next, it is to be observed that the greatest "loss" occurs in the auditorium, where it is \$975.75 per pupil. Regular classrooms vary from \$6.67 in Room 17 to \$328.88 in Room 27. With the exception of Rooms 27 and 28 (both serve partly as laboratories), the regular classrooms are seen to vary from \$6.67 for Room 17 to \$80.07 for Room 20, a difference of 90 per cent. In general, the greatest "losses" are to be found in the special rooms. Note, for example, the manual-training room with a "loss" of \$165.88; the gymnasium with \$167.14; the lunchrooms with \$312.25; and the cooking room with \$427.76. Attention has

already been called to the auditorium, where the "loss" was \$975.75. The average "loss" for all special rooms is \$267.30; for the classrooms, \$64.63.

Whether we interpret the situation in terms of "actual cost" or "loss," we are in the end

TABLE II -- PUPIL COST OF THE ROOMS

1	2	3	4	5	6
Rooms	Cubic Feet	Total Cost	Basic Cost	Actual Cost	Loss
Room 10	8,190	\$ 3,276	\$ 81.90	\$ 106.36	\$ 24.46
Room 11	8,970	3,588	89.70	118.41	28.71
Room 13	8,970	3,588	89.70	133.66	44.18
Room 14	8,190	3,276	81.90	97.50	15.60
Room 15	8,190	3,276	81.90	99.27	17.37
Room 16	7,589	3,036	86.73	124.41	37.68
Room 17	7,589	3,036	86.73	93.40	6.67
Room 18	8,190	3,276	81.90	214.11	132.21
Room 20	7,245	2,898	72.45	152.52	80.07
Room 21	7,590	3,036	86.74	112.44	25.70
Room 24	7,935	3,174	79.35	211.60	132.25
Room 25	7,245	2,898	72.45	120.24	47.79
Room 26	7,245	2,898	72.45	105.38	32.93
Room 27	11,109	4,443	138.86	467.74	328.88
Room 28	11,109	4,443	138.86	199.26	60.40
Room 29	7,245	2,898	72.45	91.70	19.25
Study Hall	16,422	6,569	69.14	74.39	5.25
Art Room	6,552	2,621	104.83	259.48	154.65
Gymnasium	38,400	15,360	256.00	453.14	197.14
Cooking	13,104	5,242	174.72	602.46	427.76
Sewing	7,560	3,024	151.20	280.00	128.80
Manual Training	15,732	6,293	262.20	426.08	165.88
Mechanical Drawing	7,560	3,024	137.45	205.71	68.26
Lunch Rooms	10,854	4,342	62.02	374.27	312.25
Auditorium	59,150	23,660	35.36	1,011.11	975.75

TABLE II. PUPIL COST OF THE ROOMS

led to the same conclusion; that is, that there is much inequality in the amount of return on the investment obtained from the various departments of the building. The two methods of presentation that have been followed differ mainly in telling us how to proceed, rather than the goal to be achieved. While in an ideal situation the amount of "loss" should tend to be constant with respect to all the rooms, the same rule would not apply to "actual cost." The latter is bound to vary owing to the differences which necessarily exist between rooms or departments serving dissimilar functions. Naturally, the "actual cost" would not be the same in the manual-training room as in an ordinary classroom.

The only way, then, that the knowledge of "actual cost" can profit us is in its application to future buildings. Perhaps, when the facts are known, it will be decided that to construct a cooking room which is to cost six times as much per pupil as a classroom, or an auditorium to cost ten times as much, is an expensive undertaking. From the "loss" method, however, there is opportunity of deriving immediate benefit. The numbers indicating the "losses" for the

(Concluded on Page 106)

TABLE I -- UTILIZATION OF THE ROOMS									
1	2	3	4						5
Rooms	Period Capacity	Days	Periods						Weekly Use
			1	2	3	4	5	6	
Room 24	40	Mon.	31	30	28				450
			Same rest of week						
Room 25	40	Mon.	27	21	37	27		33	720
			Same rest of week						
Room 26	40	Mon.	36	34	32	29	34		825
			Same rest of week						
Room 27	32	Mon.				27	30		265
			Same rest of week						
Room 28	32	Mon.	32	31		34	30		670
		Tue.	32	31		34	30		
		Wed.	32	31		34	30		
		Thu.	32	31		34	30		
		Fri.	32	31	35	34	30		
Room 29	40	Mon.	39	38	36	37	32		948
		Tue.	39	38	36	37	32		
		Wed.	39	38	36	37	32		
		Thu.	39	38	36	37	32		
		Fri.	39	38	36	37	32	38	
Study Hall	95	Mon.	100	92	80	91	92	95	2651
		Tue.	50	84	78	95	95	92	
		Wed.	80	107	82	92	93	95	
		Thu.	40	97	91	93	90	99	
		Fri.	95	97	84	93	80	99	
Gymnasium	60	Mon.	40	40	52	20	52	45	1090
		Tue.	44	40	47		75	60	
		Wed.	40	40	52	20	52	45	
		Thu.	44	40	47		30	58	35
		Fri.					30	17	25
Art Room	25	Mon.					23	23	305
		Tue.					23	23	
		Wed.					23	23	
		Thu.	20	16	23	17	23	19	
		Fri.	20	16	23	17	23	19	

TABLE I -- UTILIZATION OF THE ROOMS									
1	2	3	4						5
Rooms	Period Capacity	Days	Periods						Weekly Use
			1	2	3	4	5	6	
Room 10	40	Mon.	39	35	35	44	41		924
		Tue.	39	27	35	35	28	41	
		Wed.	39	27	35	32	28	41	
		Thu.	39	27		32	28	41	
		Fri.	39	27	35	32	28		
Room 11	40	Mon.	33	39		33	37	40	910
			Same rest of week						
Room 13	40	Mon.	30	26	38	40	40		806
		Tue.	30	26	38	40	40		
		Wed.	30	26	38	40	40		
		Thu.	30	26	38	40	40		
		Fri.	30			40	40		
Room 14	40	Mon.	40	40	40	42	42		1010
			Same rest of week						
Room 15	40	Mon.	44		43	37	32	39	991
		Tue.	44		43	37	32	39	
		Wed.	44	16	43	37	32	39	
		Thu.	44		43	37	32	39	
		Fri.	44		43	37	32	39	
Room 16	35	Mon.		33		38	37		734
		Tue.	36		33	36	37		
		Wed.	36	16	33		38	37	
		Thu.	36		33	37	38	37	
		Fri.	36		16	37	38	16	
Room 17	35	Mon.	39	39	39		39	39	975
			Same rest of week						
Room 18	40	Mon.	20				32	40	460
			Same rest of week						
Room 20	40	Mon.	25	25		22	22	20	570
			Same rest of week						
Room 21	35	Mon.	37	42	18	41		22	812
		Tue.	37	42	18	41		22	
		Wed.	37	42	18	41		22	
		Thu.	37	42	18	41		22	
		Fri.	27	42	18	41	12	22	

TABLE I. UTILIZATION OF THE ROOMS

TABLE I--UTILIZATION OF THE ROOMS									
1	2	3	4						5
Rooms	Period Capacity	Days	Periods						Weekly Use
			1	2	3	4	5	6	
Cooking	30	Mon.	22		28		24		263
		Tue.	22		28		24	25	
		Wed.	22		28		24	25	
		Thu.						25	
		Fri.	25						
Sewing	20	Mon.		21		22		23	326
		Tue.	14		18	20	20		
		Wed.		21		22		17	
		Thu.	14		18		20		
		Fri.		21	18	20		17	
Manual Training	24	Mon.	22	14	15	16	23		446
		Tue.	22	15	22	15	16	18	
		Wed.	22	14	14	16	14		
		Thu.	22	15	22	22	16	18	
		Fri.	23	14		12	14		
Mechanical Drawing	22	Mon.	Same as manual training, 446						
		Tue.	except on alternate weeks.						
		Wed.							
		Thu.							
		Fri.							
Lunch Rooms	70	Mon.	During noon hour only.						350
		Tue.							
		Wed.							
		Thu.							
		Fri.							
Auditorium	669	Mon.							703
		Tue.				53	27	23	
		Wed.							
		Thu.							
		Fri.							600

1 In use during every other week.

Just what is meant by "modern drying service" for the school washroom?

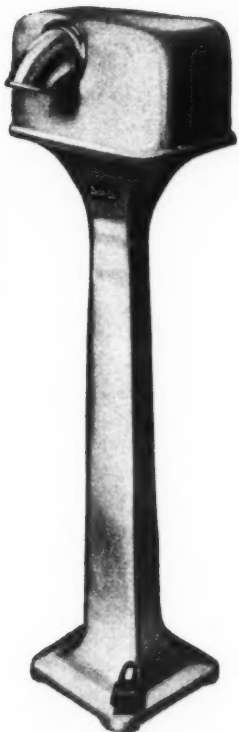
When speaking of "modern drying service" for the school washroom, we mean simply this: That proper facilities be provided, so that pupils may, in a thorough sanitary way, wash and *dry* their hands as many times each day as may be necessary.

This drying service should be adequate, regardless of the fluctuations of the budget. It should also be 100% sanitary, low in maintenance cost and low in "cost per dry."

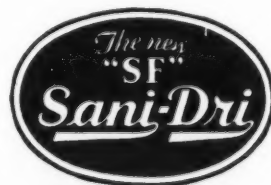
If your present drying service does not supply the necessary number of dries per pupil per day, it is neither adequate nor modern, and the chances are that it is far from economical.

Why not let the new "SF" SANI-DRI supply permanent, always-ready drying service in your washrooms? It is a *sanitary* drying service, offering far more dries for each towel dollar—and that means more hands can be cleaner, healthier and a higher standard of health can be attained in your school. SANI-DRI economy ranges from 60% to 90% over the cost of any towel service that you can install.

Would you like further facts? We'll gladly send them, and a copy of our Booklet, "The Airway to Efficiency," upon request.



The new "SF" SANI-DRI, operated by convenient foot pedal, offers a trouble-free, mischief proof drying service.



Electrical Division

CHICAGO HARDWARE FOUNDRY COMPANY

North Chicago, Illinois.

The Triumph of Convenience in the Modern School



Special types of Miller wardrobes are designed for use in high schools . . . also special adaptations of the principle of the Miller wardrobe are ready for use in the corridors as well as for installation in the schoolroom.

Write for FREE catalog.

K-M SUPPLY CO.

119-123 West 8th Street

Kansas City, Mo.

Convenience wins in the modern school. Every nook and cranny . . . every modern feature of the schools of today have a reason for being. School boards, school superintendents . . . teachers have given a great deal of thought to convenience. The manufacturers of the Miller wardrobe placed convenience uppermost in creating this Miller wardrobe. The Miller wardrobe is the result of their searching investigation of school-room problems . . . problems of wrap storage . . . ventilation . . . heating expense . . . floor space and arrangement.

The Miller wardrobe is installed in the very walls of the schoolroom. It is a perfectly ventilated, multiple operating, single control cloak room that serves a double purpose. When not in use it presents a solid wall of blackboard space. It conserves heat. It is designed to enable the janitor to clean thoroughly. It saves janitorial expense.

(Concluded from Page 104)

different rooms are immediately dependent upon the utilization of the rooms shown in Table I. The fact that one room suffers twice as much "loss" as another means that the first is being used just half as well as the second. So if anything could be done to better equalize the utilization of all the rooms, this wide variation in pupil costs could be greatly lessened. Now it is to be observed by a study of Table I that there are many periods in which the rooms are entirely vacant. Considerable headway could be made toward equalizing the costs of the rooms by so planning the schedule as to make use of some of these vacant periods.

But there are times when rooms must be used by classes comparatively small in size. With certain subjects classes are consistently small. At the same time there will be some classes too large for the room of average size to accommodate. Naturally, the only thing that will care for situations such as these is variation in the size of classrooms. With the building in question, classrooms, in all but three instances, are uniform in size. And along with this uniformity in rooms, there is considerable variation in size of classes, some actually doubling others. For instance, in Room 18 there are 20 present during the first period of every day of the week, and 40 present during the sixth period. Here again our study applies to future buildings. For the only solution of the situation just mentioned is to have been found in the original design of the building. The rooms being laid out as they are, no amount of careful administration could assure their efficient use. If, instead of the regular 35- or 40-pupil capacity, some classrooms had been designed for 20 or 25, and others for 50 pupils, much waste of space as well as unnecessary crowding could have been avoided.

But there is a better way of securing increased efficiency in the use of rooms, that is, by

increasing the interior flexibility of the building—to a degree not permitted by the usual plan of construction. In this connection might be quoted the opinion of E. E. Lewis,³ who says that junior high schools should be so built that it is "possible to use a given room for many different kinds of work and to enlarge or decrease the size of rooms easily." The only way by which this aim may be fully realized is by the erection of buildings equipped with movable partitions. Had movable partitions been provided in the building in question, the wide variation in size of classrooms shown in Table I could now be taken care of. Size of rooms could be adjusted at will to allow for any future changes in numbers, with the result that class size and room size would more nearly agree and a fair degree of equality of return on the investment would be assured.

In closing, the following may be emphasized:

1. The cost of school buildings should be considered on the basis of the cost per pupil, not only as it applies to the building as a whole, but also as it applies to the separate rooms and departments.
2. This cost may be shown in two ways: first, by the "actual cost" per pupil, and second, by the "loss" per pupil.
3. The first method is valuable only insofar as it may guide us in the erection of future buildings: whether, knowing as we do the cost of certain departments in present buildings, we should deem it advisable to include the same departments in new buildings; or if we did include them, whether we should give them the same degree of attention as at present.
4. The second method is valuable for the improvement of present situations as well as for future buildings. Its contribution to present sit-

uations is in the greater efficiency it will bring about in the use of rooms. Its contribution to future buildings lies in the fact that it shows the importance of increasing interior flexibility.

PLANNING THE TEACHER'S WORK ON THE UNIT BASIS

(Concluded from Page 74)

question. The total number of questions missed by each pupil is shown in the vertical column at the right, and the total number of times each question was missed is shown across the bottom of the chart (see Fig. III).

Most teachers have a loose-leaf notebook in which they place a copy of each test and with it, the diagnostic chart showing the test results for the whole class and for each individual member. A survey of this chart immediately reveals the parts of the unit which must be reviewed.

It is not an extraordinary occurrence for a teacher to discover, after she has completed a unit, that the diagnosis of the test shows such a large number of pupil errors on some questions that certain parts of the unit must be retaught. In cases of this sort, the teacher makes out a new preliminary lesson plan in which an estimate is made of the amount of additional necessary work. This is filed with the supervisor and is followed by a report on the lesson plan at the completion of this new unit.

The method briefly summarized compels careful and complete planning by the teacher. The preliminary lesson plan, combined with the report, furnishes a supervisory device which insures a perfect check without any complicated clerical work. The results obtained on each unit are easily analyzed. All subject matter must be reduced to small units before it can be taught so the planning of lesson assignments on the unit basis is much more logical than planning on a strictly chronological or grading-period basis.

³Lewis, E. E., "Adjusting Junior High School Buildings to Educational Programs," National Education Association, Department of Superintendence Official Report, 1923, p. 999.

Scrub no more, my lady!

Scrub no more, my lady,
Oh, scrub no more today.
We will treat our floors
From now on with
Car-Na-Var;
You can throw your scrub
brush far away!



SCRUB NO MORE, MY LADY! . . .
What a joyful tune is this to
the ears of one interested in
the economical as well as efficient
maintenance of floors.

Treat your floors with Car-Na-Var and "throw your scrub brushes far away". For Car-Na-Var provides a sturdy protective film that effectively resists the grinding-in of dirt and grime. Now . . . a simple, nightly dry mopping replaces frequent scrubbing.

What is *Car-Na-Var? A scientific combination of varnish gum and waxes that gives a beautiful, lustrous yet non-slippery finish to wood, linoleum, terrazzo, concrete, and cork floors . . . protects the

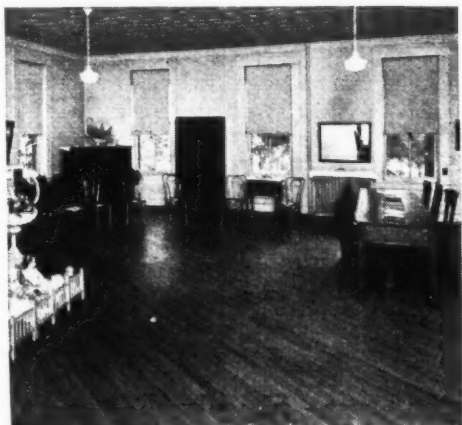
surface indefinitely from wear . . . and cuts maintenance costs as much as 50%. Far more durable and economical than other floor treatments. Comes in "natural" and popular colors . . . is readily applied with a mop.

Why not treat *your* floors with Car-Na-Var and sing farewell to scrubbing ladies and scrubbing brushes? Mail the coupon below for further details.

*For rubber floors use Rubber-Var, companion treatment to Car-Na-Var.

© © ©

Everyone interested in the efficient and economical maintenance of floors should have a copy of "Floor Research". Written by a nationally-known floor consultant. Send coupon for free copy.



After trying out many floor treatments consisting of oils, waxes, shellacs, varnishes, and fillers, the German Protestant Orphans' Home, St. Louis County, Mo., found that Car-Na-Var assured their 20,000 sq. ft. of hard maple floors much better maintenance than had ever been possible with any other material.

CAR-NA-VAR
TRADE MARK REG. U.S. PAT. OFF.
THE PERFECT FLOOR TREATMENT



THIS \$1 BOOK FREE

CONTINENTAL CAR-NA-VAR CORP., 1890 National Ave., Brazil, Ind.
(Formerly Continental Chemical Corp., Watseka, Ill.)

Without obligation send me **FREE** copy of "Floor Research". Also send me further details about Car-Na-Var and Rubber-Var and your **FREE TEST** offer.

Name _____

Address _____

By _____

"CUT THE OVERHEAD UNDER YOUR FEET"

Sanymetal Individual Shower Compartment



CONSTRUCTED of heavy furniture steel, rust-proofed with lead coating. Simplified construction, two sections only to each unit, flush type design, insulated. No sharp edges, nuts, bolts, or screws to affect beauty or safety. A neat trim finishes off all edges. Base is separate and made of beautiful "Stone-Tint" material. These showers need no special base or floor construction. Easily assembled by two men in half an hour.

Shipped in two sections, nested, with base separate—easily go through any door opening.

Finished complete before shipment in three coats of heavy baked enamel in a choice of attractive colors. Head rail brass, nickel plated.

Each compartment is a unit complete in itself. Ideal for single shower installations—or for batteries of any number in schools, clubs, gymnasiums, bath-houses, hotels, and institutions.

Write for Bulletin 56.

Sanymetal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sanymetal Gravity Hinges. Write for New Catalog No. 30.

The Sanymetal Products Co.
1703 Urbana Road, Cleveland, Ohio

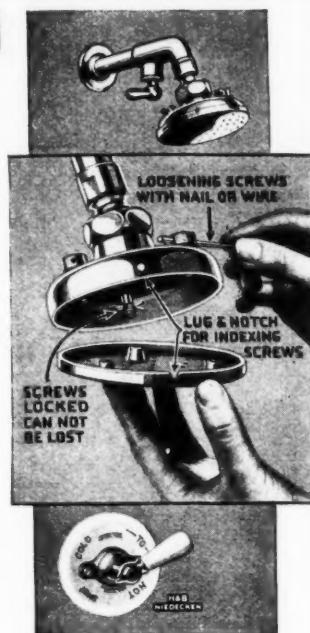
Sanymetal

STEEL PARTITIONS

NIEDECKEN SHOWERS

EASY-CLEAN SHOWER HEAD

The Shower Head That CAN Be Cleaned



As illustration shows: shower face is completely removed by simply loosening 3 screws: and replaced just as easily, a

set of notches guiding for correct placement and alignment as originally assembled. With the shower face thus removed, it can be thoroughly cleaned of all sediment that retards the water flow. All Niedecken showers come equipped with this exclusive Niedecken (patented) "Easy-Clean" Shower Head. Write now to Dept. A.S.B.J. for more details on this Shower Head or information on the Niedecken Leak-Proof Shower Stall.

HOFFMANN & BILLINGS MFG. CO.
MANUFACTURERS SINCE 1855.
MILWAUKEE, U. S. A.

Teachers' Salaries

EQUALITY IN SALARIES FOR TEACHERS OF ALL GRADES

Inequality of salaries for teachers, irrespective of their training and labor, continues to prevail in the educational systems of the country according to the findings of a recent study made by the U. S. Office of Education.

It was noted that efforts to set up equality in pay is making little progress. Prejudices, the law of supply and demand, and the tendency to work out a lower salary schedule for women are apparently obstacles to the practical operation of the theory.

In consequence of an unequal salary schedule, a class consciousness has developed among the teachers in many of the school systems. This has resulted directly from the setting up of salary schedules for different groups of personnel. In some cities, there are separate and distinct schedules for kindergarten, primary, intermediate, junior-high, and senior-high-school, auxiliary, and fresh-air teachers.

The single-salary schedule has made some progress during the past few years. A practical application of the theory has met many obstacles. Only a small number of cities have adopted the single-salary schedule. The advantages are perfectly clear, the idea is simple in operation, and is capable of introducing higher standards of professional attainment. All teaching enjoys the same dignity and equality of opportunity that tends to prevail in the profession.

SOUTH ST. PAUL SALARY SCHEDULE

The school board of South St. Paul, Minn., has adopted a new salary schedule, providing for minimum qualifications of teachers and minimum and maximum salaries based on professional training and experience.

All teachers on the staff are divided into three groups. Two-year graduates of colleges or normal schools will be given a minimum of \$1,000 and a maximum of \$1,600, with annual increases of \$50

up to a maximum of 12 years; four-year graduates will be given a minimum of \$1,250 and a maximum of \$2,000, with annual increases of \$75 up to a maximum of 10 years; teachers holding a master's degree will be given a minimum of \$1,450 and a maximum of \$2,250, with annual increases of \$100 up to a maximum of 8 years.

Under the schedule, teachers with approved experience outside of South St. Paul will receive \$50 in addition to the appertaining minimum for each year of experience up to and including four. Teachers in special-help or opportunity rooms, will be given \$100 a year, in addition to the schedule for regular teachers. Men teachers on the staff will receive \$200 in advance of the salaries indicated above.

The annual increases are contingent upon the superintendent's approval and are based upon a number of considerations:

1. Satisfactory service and evidence of growth on the part of the teacher.
2. Compliance with the additional training regulation.

Teachers with one or two years of approved special training, in addition to requirements for the position, will be given credit toward local experience. The maximum salary will be the same, except in the case of a teacher holding a bachelor's degree in the grades, or a master's degree in the grades or high school, where the salary will be \$2,000 and \$2,250 respectively. In order to obtain the extra credit, the teacher must have had additional training which is directly related to the teacher's special work.

Special-subject supervisors and teachers of special high-school subjects will receive salaries in accordance with the provisions of the schedule for four-year graduates, except that such teachers hold a master's degree, in which case this schedule will apply.

Each teacher must attend a summer school and must pursue courses related to her work, as approved by the superintendent, not less than once every four years. Credit must be earned in excess of the legal requirements to the extent of at least four summers, or one year of work. Failure to meet the summer-school regulation will mean the for-

feiture of the annual increment where the teacher has attained the maximum, or a reduction to the extent of the annual increment.

Principals and special supervisors, or teachers, not included under the regular schedule will be considered special cases and handled individually by the board.

TEACHERS' SALARIES

♦ Cleveland, Ohio. The school board has retained the teachers' salary schedule for the year 1932. The same salaries have also been adopted by the Cuyahoga county board of education.

♦ Findlay, Ohio. The school board has announced a reduction of 11 per cent in the salaries of teachers and school employees. The reduction was effected to offset revenue losses from taxation.

♦ New Orleans, La. The school board has adopted a strict program of retrenchment to obviate any salary reductions during the coming school year. The board anticipates a decrease of \$100,000 in its revenues, due to decreased city and state assessments on real and personal property. The financial situation has been further complicated by the necessity of obtaining a loan to pay for salary increases due teachers who are advanced yearly in the schedule.

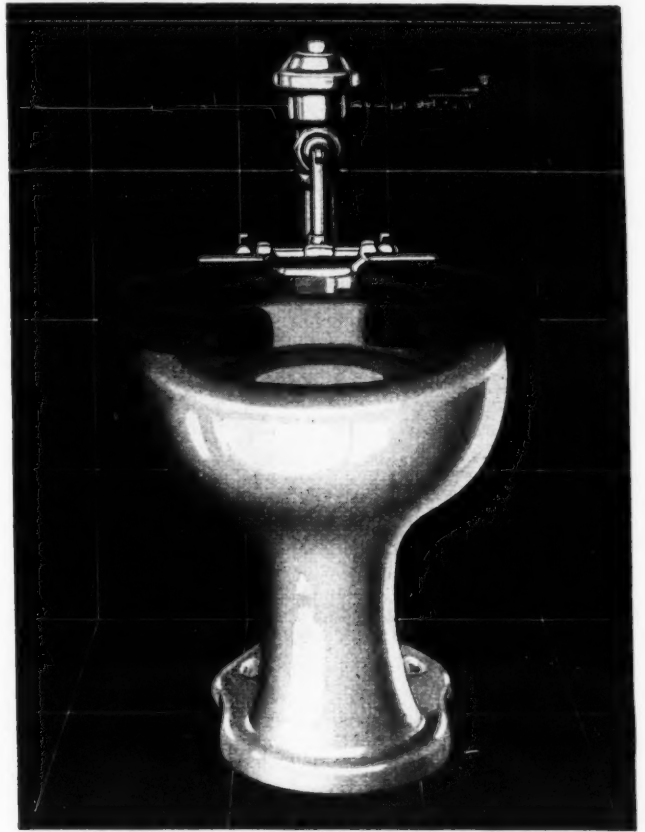
♦ Wauseon, Ohio. The school board has retained its salary schedule for teachers, with certain restrictions. When the present schedule was adopted, a few teachers were above schedule and were not reduced. In order to restrict the total payroll to that of last year, it was voted that in the case of teachers above the schedule, one fourth of the amount shall be taken from the amount previously paid such teachers.

♦ Findlay, Ohio. The salaries of employees and teachers have been reduced 11 per cent as a result of policy of curtailing school expenditures.

♦ Wellsville, Ohio. A 10-per-cent reduction in teachers' and employees' salaries has been ordered by the board of education, as a result of a policy of retrenchment. The board also voted to extend contracts for an eight-month school term, instead of nine, in order to keep within the limits of the school income.

(Concluded on Page 110)

Maintaining School Sanitation



No part of a school's sanitary equipment is more vital than waste disposal. Breakdowns are costly—and dangerous. ●

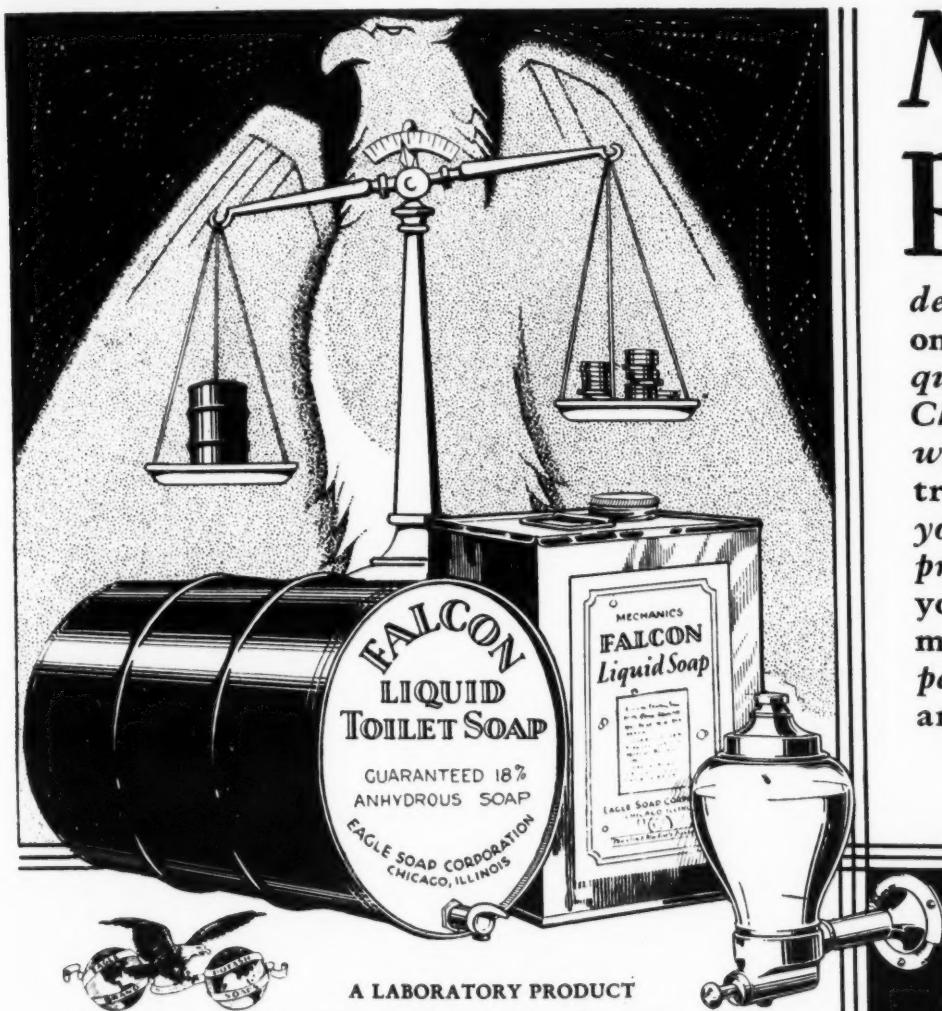
Thus it is significant that more than six thousand of the nation's finest schools are Sloan-equipped. ●

This fact is important—but not surprising. For twenty-five years Sloan has manufactured the quality products of the flush valve industry. Small wonder, then, that today Sloan Flush Valves are the first choice of school authorities and the standard of comparison by which all others are judged. ●

The Sloan line provides hand-operated or automatic seat-operated flush valves for every school requirement including floor or wall outlet closets, urinals and slop sinks.

SLOAN VALVE CO • CHICAGO

Manufacturers of Flush Valves Exclusively for Every Requirement



A LABORATORY PRODUCT

Falcon Liquid Toilet Soap is always uniform and made from the finest ingredients, by the laboratory method. It is made in three grades.—Toilet Grade, 18%; Mechanics' Grade, 18% (specially designed for cutting grease and grime); and the Concentrated Grade which contains 40% soap solids.

More Soap per Dollar!

REAL economy in liquid soap depends less on the first cost of the soap than on the other factors of concentration and quality. Bear this in mind in your purchases. **Cheap liquid soap simply contains more water.** Buy Falcon Grade C containing 40% true anhydrous soap and put in the water yourself. You can make liquid soap at any price per gallon and in any concentration you desire, save freight on the original shipment and get more soap of better quality per dollar expended. Write us for samples and prices.

EAGLE SOAP CORPORATION
25 E. Jackson Blvd., Chicago, Ill.

FALCON

LIQUID TOILET SOAP

(Concluded from Page 108)

♦ Jackson, Ohio. The school board has proposed a new salary schedule to offset the reduced state aid for schools. Under the plan, the average decrease in teachers' salaries for the coming year will be 10 per cent. Some teachers will suffer reductions of less than 10 per cent, while others will be reduced more than 10 per cent.

♦ Madisonville, Ky. The county board of education of Hopkins county has adopted a salary schedule for the 163 teachers under the supervision of the county board. The highest salary is \$158 for county high-school principals, and the lowest is \$60. The average salary for these teachers is \$75 per month. A resolution was adopted, providing for a school tax of 50 cents on each \$100 worth of property in the district, amounting to \$3,000.

♦ Chattanooga, Tenn. Supt. W. T. Robinson has approved the action of the city commission, which has vigorously resisted any effort to reduce the teachers' salaries during the present depression.

♦ The school board of Los Angeles, Calif., has received a report of a survey of salary schedules for the teaching, supervisory, and school administrative personnel, conducted by Mr. W. S. Field and Mr. O. T. Johnson. The survey which was conducted over a year ago, aimed to provide pertinent facts and conclusions which would be useful to the board of education in determining just and usable salary schedules. The survey devoted particular attention to the welfare of the children, the taxpayers, and the general personnel, and much valuable information essential to the study, was obtained from the 9,000 reports received from the personnel.

The study indicated that an adjustment of salaries is essential, and the findings show that there is a possible course that may be pursued by the board in fixing future salary rates or schedules. There are apparent a number of modifications in organization and administration which may result in providing increases in the salary schedule without raising the unit cost per pupil.

♦ Wellsburg, W. Va. The school board has reduced the school-tax levy by 7 cents, making the levy \$1.62, as compared with \$1.69 for last year.

The reduction was made possible by graduated cuts in the salaries of all school employees from the superintendent of schools down. Employees drawing salaries of \$125 to \$200 were given a 5-per-cent cut, and those over \$200 were reduced 7½ per cent. In addition, increases in pay for summer-school attendance and institute courses were eliminated.

♦ Belleville, Ill. The teachers' committee has asked the school board to approve a plan, reducing the number of days granted teachers for absence from ten to five days. The board has also been asked to approve a reduction in the daily wage scale of substitute teachers. This will be reduced from \$5 to \$4 per day.

♦ Dr. Frank P. Graves, commissioner of education of New York state, in a recent statement, makes clear that the policy of the State Education Department is against any reductions in teachers' salaries because of the depression. The commissioner's recommendation is not to cut salaries, but to see that no one enters the profession of teaching, or stays in it, who is not adequately prepared.

Dr. Graves points out that in view of the depression, it is possible to raise the teaching standards and to demand graduate work on the part of the teachers.

♦ In order to meet a 7-per-cent reduction in expenditures requested by the state finance director, the teachers of state-aided schools in Ohio will be required to accept a 10-per-cent salary reduction next year. Dr. B. O. Skinner, state director of education, has advised the state-aided districts that they may not employ teachers until after the new salary schedule has been issued.

As a result of the 7-per-cent reduction, the state-aid funds for the remainder of 1931 have been reduced to \$4,486,201 from the original schedule of \$4,825,000. The state extends aid to 705 districts, and five additional counties have asked for assistance during the next year. Lawrence county, which receives the largest portion of the state funds, has 22 weak school districts, which receive \$112,700.

♦ New Philadelphia, Ohio. The school board has reduced the salaries of teachers 10 per cent, with a saving of from \$15,000 to \$16,000 for the next year. The reduction in salaries became necessary in order to offset a reduction in tax duplicates due to a reappraisal of city real estate.

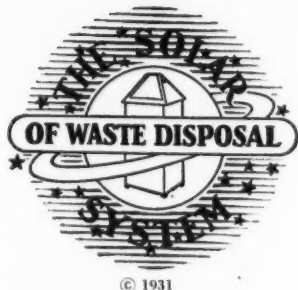
♦ Schools in Jackson county, Ohio, will have an eight months' term next year due to a reduced school income. The salaries of teachers will be revised downward, the reduction to be graduated so that the higher-paid teachers will take the largest cut in salary.

♦ Dayton, Ohio. The school board has issued new contracts to the teachers for the school year 1932, which involve graduated pay cuts from nothing to 11 per cent. The action became necessary to meet an anticipated reduction in the school income.

♦ In the State of Wisconsin, children of school age, who are inmates of child-welfare-agency homes, are entitled to attend school in the school district in which the homes are located. According to the attorney general of the state, the school district can make no tuition charge.

The successful teacher of adults must, in a very conspicuous sense, be more interested in his students than in his subject matter. A teacher may be able to drone his way through his subject in the high school and in the grades, since the children have to study it. But in dealing with adults he must realize—as he should do with children—that his students have problems and interests and that he should know what they are. With adults the teacher directs his efforts rather toward expounding the principles of his subject matter. He is trying to discover what their questions are, why they are asking the questions, and what is the meaning of those questions in terms of their background. When he has discovered these facts, he uses the materials as deftly as an artist to help his students answer their questions and solve their problems.—W. W. Charters.

and School Sanitation



..... Why

To instill the appreciation and habit of order and cleanliness among pupils. To avoid littering school floors and school grounds with waste paper, rubbish, refuse and residue, and thus prevent unsightliness, and insanitation and its ills. And because Solar System Receptacles have gravity-operating top (self-closing) which insures constant closure and a secure container . . . and because the gravity swinging cover is a delight for the pupils to operate, giving a distinct pleasure to maintaining cleanliness. Write for complete details of the Solar System now.

SOLAR-STURGES MFG. CO., MELROSE PARK, ILLINOIS

By a High-School Principal

The former constituency was quick to analyze these figures. The data were taken from official records, and the teacher load suggested as ideal

DISTRICT	A. D. A.	No. of Teachers	Teacher Load	Teachers at 35 Load	Allow Superv. 1 to 300 Teachers	Savings in Teachers	Av. Salary per Teacher	Savings
<i>Elementary Schools</i>								
Adetro	758	29	27	22	2	5	\$1,640.00	\$ 8,200.00
Maneca	1927	73	27	55	7	11	1,524.21	16,766.31
Troy	1348	53	26	39	5	9	1,583.23	14,249.07
Jastro	3881	144	27	111	13	20	1,472.20	29,444.00
Total saving in four districts.....								\$ 68,659.38
<i>Teachers at 28 Load</i>								
<i>Junior High Schools</i>								
Pickwick	453	25	18	16	2	7	\$1,583.23	\$ 11,082.61
Fairbanks	1539	77	20	55	5	17	1,472.20	25,027.40
Total saving in two schools.....								\$ 36,110.01
<i>Teachers at 25 Load</i>								
<i>High Schools</i>								
Barlo	1094	70	16	44	4	22	\$2,016.78	\$ 44,369.16
Elk City	258	21	13	11		10	2,123.33	21,233.50
Enlow	970	57	17	40	4	13	1,922.77	24,996.01
Total saving in three schools.....								\$ 90,598.67
Total saving in 33 schools listed in this county....								\$247,837.64

The principal said that some teachers could handle more students than other teachers, also that some rooms were too small or lacked equipment to handle the maximum number of students that could be taught properly. A recent writer on this subject who calculates teacher load in terms of periods per day rather than class membership per teacher points to the tendency to reduce high-school periods from six periods per teacher to five periods per teacher as highly beneficial, even though the class membership be thereby increased. A high-school teacher advances the argument that extracurricular work has now become so important that the teacher must be relieved of some of the regular teacher load in order to adequately handle extracurricular responsibilities.

Palmer MYSTIC GLOSS

*Dries Bright
and Hard in a
Few Minutes*

THE PREFERRED FLOOR FINISH AMONG
SCHOOLS AND OTHER PUBLIC INSTITU-
TIONS — ENDORSED BY LEADING FLOOR
MANUFACTURERS

BECAUSE . . .

It is the most economical of all floor
finishes . . .

Actually reduces floor maintenance costs
up to 50% . . .

Makes brighter, cleaner floors . . .

Easy to apply . . . easily maintained . . .

Floors ready to use 20 minutes after
application . . .

Does not stain baseboards or furni-
ture . . .

Equal to any wax in wearing qualities . .

May be applied on rubber, asphalt, as-
bestos, or other soft composition floors
as well as wood, terrazzo, and similar
surfaces.

Write for trial sample and literature. We will gladly
send you names of schools now using Mystic Gloss.

Manufacturers
of
MULTI-SERVICE
PRODUCTS

Palmer
PRODUCTS INC.
WAUKESHA, WIS.
Adjacent to Milwaukee

Submit your
sanitary and
cleaning prob-
lems to us.

**For
spotless
cafeterias
at low
cost**

SCHOOL cafeterias must
be kept clean and sani-
tary. But high sanitary stand-
ards need not mean high
cleaning costs.

By using Oakite for all cafe-
teria cleaning, you can be
certain of thorough cleanli-
ness at low cost. Pots, pans
and other kitchen utensils
are simply soaked clean the
Oakite way. Dishes, alumi-
num trays, cutlery and sil-
verware are washed better
in less time. Work is saved
in cleaning floors, walls,
counters and furniture.

Write and ask to have our
nearest Service Man show
you how little effort will be
needed to keep your cafeteria
clean the Oakite way.

Manufactured only by

OAKITE PRODUCTS, INC.

26B Thames St.,

NEW YORK, N. Y.

OAKITE
TRADE MARK REG. U. S. PAT. OFF.
Industrial Cleaning Materials and Methods

In one of the junior high schools mentioned in
the study by the supervisor, the average class
membership at the time of the study was as
follows:

English	27.1	Physical education	28.5
Social science	28.2	Music and Penmanship	29.1
Mathematics	29.2	Study halls	46.5
Science	29	Shop	16.3
Spanish	26.3	Art and home	
Latin	15.3	economics	17

Is this class membership determined by the size
of the room, the number of seats, and the adequacy
of equipment, or is it based upon a scientific study
of the load of highest efficiency that can be handled
by the teacher with due regard to health, extra-
curricular duties, and other necessary factors? That
is a fair question. Suppose a taxpayer in the dis-
trict should ask that question of the principal. What
would be his answer?

In a senior high school in the writer's list there
were in one year the following variations in the
total class membership in classes in the various
subjects.

English	from 16 to 32	Commercial	from 9 to 38
History	from 13 to 40	Shop	from 9 to 28
Language	from 14 to 36	Art	from 7 to 24
Science	from 14 to 33		

A survey of the teachers in this high school
covering the opinion of each teacher as to the load
she would consider ideal in her work, revealed the
following differences of opinion among teachers in
the same department. English-composition teach-
ers varied in opinion from a load of 15 to a load
of 25 students in class membership daily.

English com- position	from 15 to 25	Bookkeeping	from 20 to 25
English litera- ture	from 20 to 30	Shorthand	from 20 to 22
Public speak- ing	from 17 to 25	Typewriting	from 20 to 25
Study hall	from 30 to 70	Business	
History	from 20 to 25	English	from 20 to 24
Biology	from 20 to 25	Salesmanship	from 23 to 25
Chemistry	from 18 to 25	Art	from 20 to 25
Botany	from 20 to 24	Music	from 22 to 30
Physics	from 16 to 24	Physical	
Language	from 20 to 22	Education	from 35 to 50
Algebra	from 20 to 25	Auto shop	from 10 to 12
Geometry	from 20 to 25	Machine shop	from 15 to 20
Cooking	from 16 to 20	Printing	from 10 to 15
Sewing	from 18 to 20	Mechanical	
		drawing	from 18 to 20
		Wood shop	from 18 to 20

When confronted with the figures in comparative
array, the teachers agreed that they had given their
estimate, having in mind the ideal, rather than the
practical load. Considering this estimate as one
extreme and the supervisor's as the other extreme,
just where would the two estimates reach a practi-
cal mean that should be acceptable to the profes-
sional man and to the layman because of its
reasonableness and because of the results produced
in practice?

This is a question involving more than the mere
saving of \$247,837.64 in a single county. It
challenges the professional schoolman to a study
of the entire situation to the end that the schools
shall not be wasteful through ignorance or through
laziness of executives and teachers and that prin-
ciples may appreciate the added efficiency an in-
telligent balancing of classes will give.

SCHOOL ADMINISTRATION NOTES

♦ Rockford, Ill. The elementary-school super-
visory staff has been completely reorganized, with
an extensive reassignment of principals and a ma-
terial reduction in the number of principals em-
ployed. With the opening of the new school year
in September, most of the nine remaining ele-
mentary principals will be transferred to new
schools, and one new principal employed, bring-
ing the total number of faculty heads to ten.

Under the new plan of administration, each of
the principals will be in charge of at least two
elementary schools, and one will supervise the
teaching in three schools. The changes are the
result of a carefully worked-out plan which has
been under consideration for eight years, and they
are expected to bring about a material reduction
in the cost of school administration. Under the
plan, with ten principals supervising instruction
in 21 schools, the average per-pupil cost of super-
vision will be only \$4.03.

♦ The high school at Perth Amboy, N. J., has
reported a 50-per-cent increase in enrollment dur-
ing the past two years, the enrollment increasing
from 1,200 in 1929-30, to 1,810 in 1931-32. There
will be an increase of 18 per cent in the number
of teachers employed.

A new system of promotions has been success-
fully operated. The plan which replaces the for-
mer semiannual promotion system, allows pupils
to be promoted at any time when the school
authorities deem it desirable. The larger part of
the promotions occur in June.

♦ At Memphis, Tenn., the suggestion is advanced
that the mayor of the city be made an ex officio
member of the board of education.

♦ Virginia, Minn. The school board has adopted
a policy which is opposed to the giving of musical
programs which are not educational in character.
The board has made it plain that they intend to
spend school money for school purposes.

Under the new plan, the board has announced
that it will not pay the expenses of any dance
orchestra, or similar outside organization which is
not sponsored by the school authorities. Expenses
of school organizations will be borne by the school
board as in the past.

♦ Knoxville, Tenn. The all-year school plan pro-
posed by Supt. Harry Clark to relieve congestion
and reduce expenses in the schools, has been
approved by the city principals, following a con-
ference of the school-administrative officials.
Under the plan, there would be a free summer
school for junior and senior high schools as an
integral part of the school year, dividing the pupils
so that each pupil goes to school nine months of
the year. The plan would permit the continuous
use of the school buildings and would accommodate
an increasing number of junior- and senior-high-
school students.

♦ Longmeadow, Mass. The school board has dis-
continued the plan of admitting children to the
kindergarten in February and September. Hereafter
there will be only one time of admission in
September.

♦ A rule adopted by the Evansville, Ind., board
of education in 1926 provides for compulsory
retirement from the school service at the age of
70. Principal John M. Culver, who had been in
service of the school system for 29 years and who
had reached the age of 70, refused to abide by
the rule. Thereupon the board of education dis-
missed him upon the charge of insubordination.



Bad Years are Good Years for Insanitation, Inc.

Especially in times of business recession and compromised expenditures this firm of Insanitation, Inc. votes itself big dividends.

Give this gruesome group just one faulty plumbing fixture, valve, closet, urinal or just one antiquated drinking fountain and their insidious work begins.



*This is Soldier
CARL "Rody" RODENHAUSEN,
Detroit Office, who helps de-
feat insanitation and excessive
costs in that area.*

○

Any compromise in plumbing expenditures for a new building, any holding up of repairs or replacements in an old building too often allows Insanitation, Inc. to reap its filthy harvest.

In addition, the nickels and dimes seemingly saved through such compromises soon change into big dollars of repair and replacement costs that can be deferred no longer.

For more than fifty years the Clow Soldier of Sanitation has been fighting the firm of Insanitation, Inc., especially in public and semi-public buildings, schools,

hospitals, industrial plants and the like.

During that long time Clow has developed the most complete line of specialized fixtures, for such buildings, in the entire world.

And the Clow Soldier of Sanitation has built up a background of experience that enables him to help you get the plumbing installation that will keep out Insanitation, Inc. for the years to come, without expensive repairs and replacements, and to get that installation at the most economical cost. There is no obligation in talking to a Clow Soldier of Sanitation. Call him in.

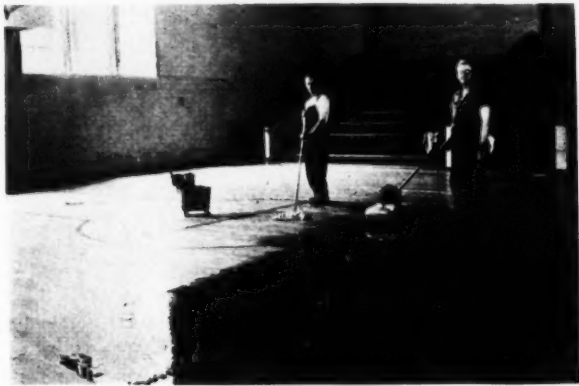
CLOW

CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878

Consult your Architect

REJUVENATE THE GYM FLOOR . . .



Hillyard's Special Gymnasium Floor Finish produces outstanding gymnasium floors.

It is specified by leading architects and contractors for new floors and, as pictured at the left, it is very easy to reclaim old floors.

The finished surface is smooth, durable and NON-SLIPPERY.

A clean, sanitary floor is insured for children's games and exercises. It may be kept that way with very little work and a very minimum of expense.

This finish, on floors in thousands of outstanding schools and colleges, has in many instances worn for several years without a retouching. It's durable and does not flake or peel.

The entire treatment for either new floors or for old ones is surprisingly low in cost.

PREPARING THE FLOOR

Every job is a GOOD job because a Hillyard Maintenance Engineer supervises the work. This service is given without additional cost.

Community life often centers around the gymnasium. Therefore, this floor should be made as attractive and practical as possible. Thousands of people gain their impressions of school systems from a visit to the gymnasium. Make their impression of your building a good one. It's very easy to have the best. Mail the coupon today and allow us to give you detailed estimates.

SHINE-ALL SALES CO.

DISTRIBUTORS

Hillyard Chemical Co.,
ST. JOSEPH, MO., U. S. A.

Copyright, 1931

A FINISHED JOB



HILLYARD CHEMICAL CO. A-A
ST. JOSEPH, MO.
GENTLEMEN:
Please send Floor Consultant to give us estimates for refinishing our gymnasium floor.
NAME.....
POSITION.....
CITY.....
STATE.....

Teachers and Administration

QUESTIONS FOR THE BEGINNING TEACHER

A county superintendent in Missouri, according to the Bulletin of the Department of Education, recently recommended to the school-board members in his county the following questions to be asked prospective beginning teachers:

1. Name of high school from which you were graduated?
2. In your progress through school from the first grade to graduation from the twelfth grade did you repeat or skip any grade. (1) repeated..... (2) skipped.....
3. Have you ever been refused admission to any high school? Have you ever been removed from any high school?
4. Have you ever attended any college or university? Yes..... No.....
5. How many brothers older? Younger? How many sisters older? Younger?
6. How many magazines and periodicals come to your home regularly? (1) None (2) One (3) Two or more
7. Name as many of these magazines and periodicals as you can.
8. How many nonfiction books have you read during the past 12 months?
9. During how many summers since you entered high school have you had (1) Steady Job? (2) Odd Jobs? (3) Traveled? (4) Had Nothing to Do?
10. How much time outside of actual school hours do you expect to give to preparation of class and study supervision? (1) None (2) One Hour (3) Two or more hours
11. When you have free time at your disposal, what do you do with it usually? (1) Chum Around with Pals (2) Read (3) Work at Some Hobby What Hobby?

12. When called upon to recite in class, do you usually become confused? (1) Yes, Very Much (2) Somewhat (3) Very Little (4) No, Perfectly Calm (5) No, it stimulates Me

13. When assignments are made, is your work ready on time? (1) Seldom (2) 25 per cent of the Time..... (3) 50 per cent of the Time..... (4) 75 per cent of the Time (5) Yes, Always

TEACHERS AND ADMINISTRATION

♦ Chattanooga, Tenn. Under a rule of Supt. W. T. Robison, girls who smoke will not be given teaching positions.

♦ The school board of Indianapolis, Ind., has reaffirmed its policy that married women will not be recommended for initial employment.

♦ San Francisco, Calif. Back pay due 517 teachers, totaling \$90,714, has been paid to the teachers by the auditor, as a result of action on the part of the board of education. Further similar payments bringing the aggregate to around \$400,000 are expected to be made later in the year, as a result of the court's ruling that teachers are entitled to the adjustment as a result of a change in the fiscal year.

♦ Battle Creek, Mich. The school board has adopted a resolution, providing that all employees of the schools be allowed 10 days' absence with full pay. The absence will be granted under the following conditions:

1. Personal illness or quarantine.
2. Serious illness in the immediate family.
3. Death of a near relative.

At the end of each year, the unused portion of the 10 days will become accumulative and will be used at some subsequent time for the above purposes. An accumulation of not to exceed 60 days will be built up.

♦ New York, N. Y. Teachers on the waiting list for appointment in the elementary schools of the city face a poor prospect for the year 1932. The board-of-education budget committee, anticipating a continued decrease in grade-school enrollment, has requested funds in the 1932 budget for only 128 additional teachers.

There are 3,580 teachers on the waiting list, and 1,200 more names will be added as a result of the January and June examinations. The 128 additional positions do not represent the total number of appointments that will be made during the coming year.

♦ San Francisco, Calif. Teachers of the city schools have been asked to sign agreements to return to the city treasury any unearned portion of their vacation salaries which are paid in advance as a result of a recent order of the school board. The action was taken to prevent losses on account of teachers leaving the service before the end of the school year.

The failure of former teachers to account for unearned salary has been partially blamed by accountants for the \$2,000,000 which has been overpaid to teachers during the past 25 years through lax bookkeeping methods in the business department.

♦ Lorain, Ohio. The salaries of substitute teachers have been reduced 50 cents a day for the next school year. In some cases, the reduction will amount to 25 cents, in order that the salaries of experienced teachers may be kept above those of inexperienced teachers. The maximum in senior and junior high schools for substitutes is \$5.50, while that for the grades will be between \$4.50 and \$5.50.

♦ County school superintendents of Ohio have been asked by State Superintendent Skinner to weed out the undesired teachers on their teaching staffs. In a letter to the superintendents, the director pointed out that many qualified teachers are unassigned and can be obtained to bring about higher standard in the teaching staffs. The untrained teachers are those without degrees and those who have not increased their professional training by summer-school courses. In some cases, exceptional teachers have been unable to meet even the minimum requirements.

♦ Greenup, Ky. The board of education of Greenup county has adopted a resolution, which bars nonresidents as teachers in the county schools, unless they have previously taught in the county.

IT IS EASY FOR YOU TO TEACH

Cleanliness

**AND RESPECT FOR
PROPERTY**

TEACHERS know how thousands of youngsters need to be taught these two things early in life. Whale-bone-ite Toilet Seats are unmistakable object lessons in the very place where uncleanness and abuse of property are most likely to show themselves.

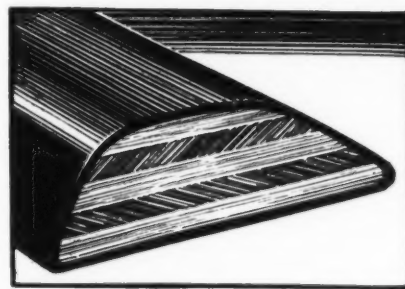
Start a cleanliness campaign. Have every toilet seat in the school looked at by the janitor. Get a report on their condition. Is the finish worn off, permitting the wood to absorb moisture? Are any split, or cracked? Do any have corroded hinges? Cracked seats and corroded hinges gather dirt and breed germs. Old-fashioned, worn-out unsightly toilet seats encourage uncleanness and invite abuse. Get rid of such seats and install handsome, new

Whale-bone-ite Seats in their place.

Whale-bone-ite always looks new, clean and inviting. It keeps its beautiful appearance forever. Once installed, Whale-bone-ite never has to be replaced. It is guaranteed for the life of the building, ending replacement expense once for all.

*Send Coupon for New Book
"Install Them Once
They Last Forever"*

In order to have proper toilet seats in present buildings or new schools, get the complete story of Whale-bone-ite Seats as told in this new book. No cost or obligation. Send coupon today. Address, The Brunswick-Balke-Collender Co. Dept. BB5, 623-633 So. Wabash Avenue, Chicago, Ill.



WHALE-BONE-ITE CROSS-SECTION

In this cross-section note the cross-grain, laminated construction, exclusive with Brunswick, that gives Whale-bone-ite a super-strength that defies time and abuse. It is the only construction that combines unbreakable strength with necessary lightness and sanitary qualities.

Jet-black, glass-smooth and diamond-hard, Whale-bone-ite beauty never wears off seat or hinge. No exposed metal to harbor dirt and germs. Easy to keep clean and sanitary with minimum effort. Non-inflammable. With all these advantages Whale-bone-ite costs no more than the cheapest moulded composition seat made.

Brunswick
LAMINATED
WHALE-BONE-ITE
TOILET SEATS

The Brunswick-Balke-Collender Co.
Dept. BB5, 623-633 So. Wabash Ave., Chicago, Ill.

Gentlemen: Please send me without cost or obligation a copy of your new book that gives the complete story of Whale-bone-ite Seats.

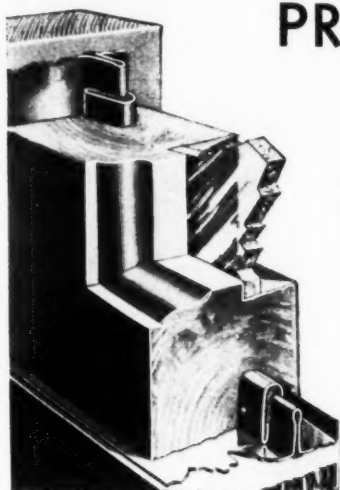
Name

Name of School

Street

City State

IT TAKES A WHALE OF A SEAT TO STAND PUBLIC TOILET ABUSE



PREPARE FOR WINTER NOW!

Think of saving \$1500 a month on coal bills alone by using ATHEY Weatherstrips to keep out the cold, wind and draft! That's what they did in St. Louis last year, and in one Chicago building they saved 572 tons of coal in 5 months by the same method.

Wherever ATHEY weatherstripping is used it is estimated that the savings made pay for the installation within three years—and often in less time.

ATHEY cloth-lined metal weatherstrip changes any wood or steel window from a rattling, loose, drafty sash to one that works smoothly and quietly, becoming at once air-tight and draft-proof. The increase in comfort, better health, fuel savings and cleaner furnishings make the investment in ATHEY weatherstrips pay big dividends.

Investigate this feature now and be prepared for winter. Send for catalog and list of installations, showing how others have profited by ATHEY methods.

Send for Book

ATHEY COMPANY
6093 W. 65th St., Chicago

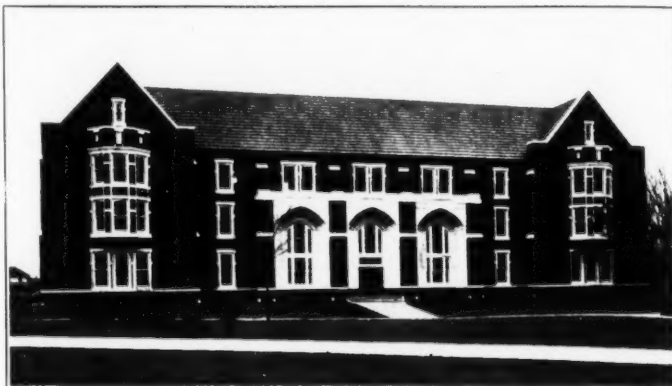
Representatives in Principal Cities

In Canada: Cresswell-Pomeroy Co., Reg'd.
Montreal and Toronto

Athey CLOTH-LINED
METAL WEATHERSTRIPS
SAVED \$1500
A MONTH ON COAL

Another Athey Product
ATHEY SEAL-TITE

An efficient calking compound for filling the cracks and crevices around window sills. Entirely waterproof, easy to apply, doesn't stick to knife or calking irons. Elastic—unaffected by temperature. Contains no creeping oils that bleed out, staining or gathering dust and dirt on the stone or brick. It is very adhesive and can be colored to match any material.



Music Hall at the Kansas State Teachers' College, Pittsburg, Kansas. Architect, Mr. Cuthbert, State Architect of Kansas. Sound-proofed throughout with Cabot's Quilt.

No Chinese Bedlam Here!

If this music hall had been built in old China instead of at the Kansas State Teachers' College, no insulation would have been used, because the Chinese liked bedlam. But the Kansas state architect, Mr. Cuthbert, knew that the only scientific way to build a music hall was to sound-proof it throughout.

For this sound-proofing he used Cabot's Quilt, the most effective and economical material he could find. Cabot's Quilt is low in price, flexible and easily installed, is rot-proof, vermin-proof, fire-resistant and ever-lasting.

Mail the coupon below for full details.

Cabot's Quilt

Samuel Cabot
Inc.

141 MILK STREET, BOSTON, MASS.

Gentlemen: Please send me your Laboratory Bulletin No. 5

Name

Address

ASB-9-31

SCHOOL ADMINISTRATION'S NEED

(Concluded from Page 34)

In these decisions upon policies, the same business wisdom recognizes that, if the superintendent who must carry out the policies is not the best technical adviser available in the effort to decide, a very serious error in judgment has been made in the selection of the most important force in its organization.

TUITION IN THE PUBLIC SCHOOLS

(Concluded from Page 45)

Usually, it is found that arbitrary tuition charges do not tally with the per-capita cost of education.

Pupils attending "normal training high schools" for the purpose of taking the normal training course are usually exempt from tuition, because of the state aid that the institution receives. This is also true in other special types of high schools which receive considerable state aid for the maintenance of the special departments.

To summarize it may be said that:

Tuition may not be charged resident pupils in states where the constitution provides for a system of free schools.

Residence is generally determined by the fact that a person has gone to a place in good faith for the purpose of acquiring a home, and not solely for educational purposes.

Tuition may not be disguised under the form of other fees, but incidental, laboratory, library, and other such fees may be charged as are not in conflict with statutory provisions.

The amount of tuition is usually the per-capita cost of instruction, the bases of which may vary. In some states the school board has power to determine the rate while in others the rate is determined by statute.

The right of accepting nonresident pupils usually rests with the school board but the fees must be uniform to all.

The tuition is payable by either the district or the individual according to the particular statutes governing the district in question.

In general, a district must pay the tuition in case it does not provide adequate training conveniently, although in some instances the district will not pay tuition in higher schools than it operates.

THE PRACTICABILITY OF STATE INSURANCE FUNDS

(Continued from Page 48)

is highly technical and requires, for success, years of training and experience on the part of men responsible for its conduct.

No state or city government, or private individual, can compromise with the principles of safety and expect to get a lasting benefit. Not even the most reckless person would throw dice if there was only a small chance of gain over a long period of time as against a real possibility of sudden and disastrous loss.

Experience with state insurance funds has been far from satisfactory in many instances.

Funds Fall Short

South Dakota established a state insurance fund in 1913, paying into it sums which otherwise would have gone for insurance premiums and, in January, 1925, had available only \$150,000 to cover a loss of \$300,000 resulting from the destruction of the state normal college at Spearfish.

Decided in Favor of Private Insurance

In 1924, a committee of the board of education of Madison, Wisconsin, advised the board to leave the expiring school insurance in stock companies, despite the saving of over \$1,000 in premiums which would have been effected by entering the state fund. The action was taken

owing to certain objectionable features of the state's proposition, one of which was that it depended entirely upon the state treasury in case of excessive losses.

"Borrowed" From State Fund

In 1929, the legislature of Wisconsin "borrowed" \$900,000 from the state fire-insurance fund to build a state office building and children's hospital. This was to be repaid in annual installments, but the 1931 legislature sought to repudiate these payments so as to make a reputation for economy.

Under the heading, "Looting the State Insurance Fund," *The Milwaukee Journal* commented as follows on this, citing a parallel case: "Suppose a private insurance company, organized and doing business in Wisconsin, carried as a risk the public buildings of the state and many county and district school structures. Suppose the company had a reserve fund against losses of \$2,093,931. Then suppose it was discovered that the directors had borrowed from this reserve and spent the sum of \$900,000, and had decided a little later that they would forget the debt—that is, never pay it back. What a howl would go up from the present political leaders in control at Madison. It would be a perfect example of 'looting' by big business."

No Funds to Meet Losses

Following two \$500,000 fires in state normal schools, a \$750,000 fire wiped out the state teachers' college at Moorhead, Minnesota, in January, 1930. No insurance was carried and no funds were available for rebuilding until the next meeting of the legislature in 1931. And, of course, the funds for rebuilding will have to come from the taxpayers.

The *St. Paul Pioneer Press* commented editorially upon the failure of the Minnesota fund, in part, as follows: "The astounding revelation

(Concluded on Page 119)

Give your students

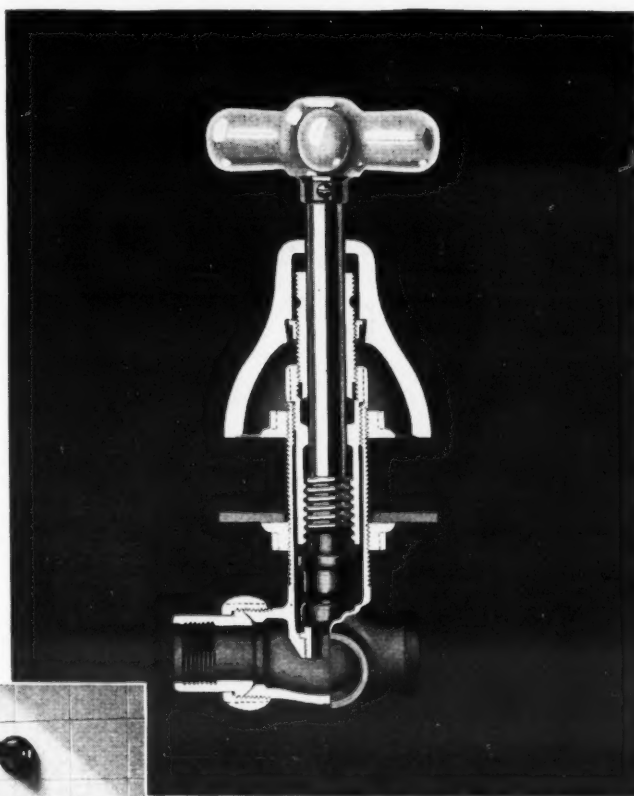
the advantage of Crane compression showers



Most important of all reasons why Crane compression showers give greater satisfaction both in bathing and in maintaining are the Crane shower valves. All Crane concealed compression showers are equipped with them, and there are 11 reasons why every concealed shower should be.

- 1 Trimmings are interchangeable, china, metal, or ornamental can be used.
- 2 Stems are one-half inch in diameter, providing extra strength.
- 3 Ample adjustment for variation in wall thickness.
- 4 Adjustable stuffing box nuts.
- 5 Smooth, easy operation is assured by long, accurately machined stem threads.
- 6 Stem threads in center-piece permit replacement of entire operating unit without disturbing valve bodies.
- 7 Heavy bodies with large area-way throughout.
- 8 Swivel discs permit closing valves tightly with minimum effort and reduce wear on discs.
- 9 Seats are renewable from face of finished wall.
- 10 Union connection for supplies.
- 11 Locknuts hold valves securely to partition.

To have these advantages is to go far towards having a shower installation which is always dependable and never costly to install and maintain. When in addition to them you have easily cleaned Crane shower heads, and carefully engineered



Section view of the Crane Concealed Compression Shower valve

◇
C 4404 BU Concealed Compression Shower
◇

Crane piping—you have gone all the way! Crane showers are made in many types for all requirements; they cover a wide range of price—but in all of them there is only one standard of quality. Full information concerning them can be had by visiting nearby Crane Exhibit Rooms, or writing Crane Co.



Valves



CRANE

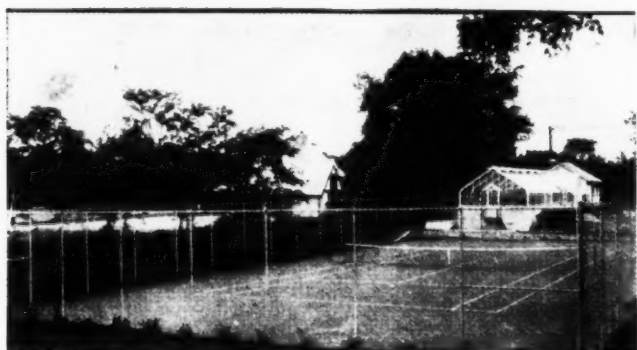


Fittings

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVE., CHICAGO

NEW YORK OFFICES: 23 WEST 44TH STREET

Branches and Sales Offices in One Hundred and Ninety Cities



Tennis Courts

... fenced in keeping
with your other grounds

Back stops need not be an eyesore. Wickwire Spencer Tennis Fence is as trim and clean cut as are all of their wire fences. In that both framework and netting are rust resisting, made of copper bearing steel and hot dipped galvanized, vines can be trained over them. Without obligation on your part, we will gladly send a representative to see you and make a quotation for material alone or on a completely erected fence. Wickwire Spencer manufactures and erects attractive chain link fences that assure protection for all types of properties.



This triangular name plate
appears on all genuine Wick-
wire Spencer Fences.

Wickwire Spencer Steel Company
41 East 42nd Street, New York City

Buffalo Sales Office: 1 River Road
Worcester, Chicago, Cleveland, Philadelphia, Tulsa
Pacific Coast Headquarters: San Francisco
Branches and Warehouses: Los Angeles, Portland, Seattle
Distributors and Erectors in all principal cities

WICKWIRE SPENCER
Chain LINK fence

I would be pleased to receive a copy of your latest
catalog on fence.

Name.....

Address.....

City and State.....

Night Football

Increased
Attendance
400 %
With—



GIANT FLOODLIGHT PROJECTS

The attendance at the first game played under Giant Floodlight Projectors at West High School, Waterloo, Iowa, was 400% greater than the same daylight game played two years ago.

High Schools and Colleges everywhere, have trebled and quadrupled attendance by installing Giant Projectors for night play. Not only is it a huge success financially, but there is less physical strain on players, no interference with studies, and it affords the opportunity for night practice games.

Giant Floodlight Projectors have proven BEST for all Night Athletics—80% of all athletic fields are Giant-equipped. Write for catalog and complete information.

Ask also for
new Giant
Playground
Equipment
Catalogue.
Free on
request.

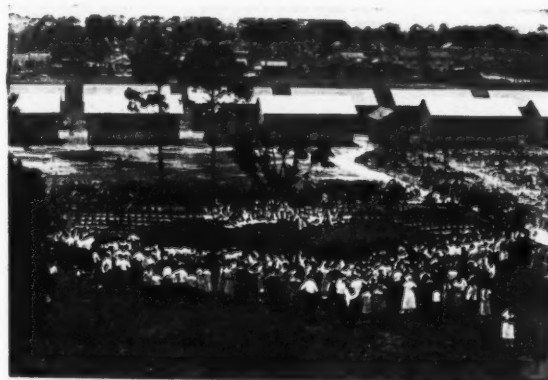
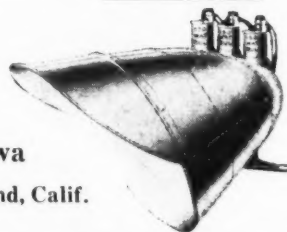
Giant Mfg. Co.

Division R

Council Bluffs, Iowa

Trenton, N. J.

Oakland, Calif.



Avoid That Dread Cry of "FIRE!"

Safety for school children requires FIRE-PROOF buildings. Whether for permanent or overflow use, you will find Ambler Asbestos structures practical and economical—comfortable and attractive—worthy of your town.

Write for descriptive
catalog; coupon below

ASBESTOS BUILDINGS COMPANY
1013 Liberty Trust Bldg., Philadelphia, Pa.

Gentlemen:

9-ASB-1931

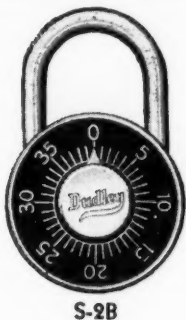
Please send your descriptive catalog.

Name

Street

City

LEADERSHIP FOR YEARS



DUDLEY LOCKS have composed the great majority in the lock equipment of American schools for a sustained period.

Such leadership could not be maintained without a firm foundation. The Dudley Lock Corporation has gradually developed the strongest, surest, and "easiest-to-operate" locks of all, including the new self-locking device.

If you have a locker problem, write for information to the world's largest manufacturers of combination locks.

Sample lock sent for free examination.



DUDLEY LOCK CORPORATION
26 North Franklin St. Dept. A-19 Chicago

DUDLEY LOCKS

SL-2

(Concluded from Page 116)

... should be ample demonstration that the state should never go into the insurance business or any other line of business. Prior to 1913, all state property was insured in private companies in the usual manner, but the legislature that year thought that a saving could be made if the state carried its own insurance.

"The arrangement was hailed as a great reform and the ever-trustful taxpayers were promised that a considerable saving would result. As is generally the case when a state engages in a business enterprise, the reverse has been true."

State Fund Abandoned in Michigan

"The fire fund, which was first provided for by the legislature of 1913 in an act which became effective July 1 of that year," says an article in the April 8, 1926, number of the *Insurance Field*, "was a cumbersome method of 'robbing Peter to pay Paul,' it is quite generally conceded by Michigan state officials and insurance men. Its passing, apparently, has aroused no laments, even among those who were most ready to attack actions or policies of the current administration in Michigan. But its demise does, insurance men feel, signify a real moral victory for sound insurance."

Heavy Losses in Colorado

Colorado now appreciates the fallacies and dangers of the state insurance-fund idea. Lulled by a period of comparatively light losses, the legislature in 1925 ordered that all insurance on state institutions be dropped at expiration. The state thereafter was to carry its own insurance risks, and the legislature provided for a sinking fund of \$40,000 a year to meet the losses. Less than a year later, a fire in the Colorado State Agricultural College at Fort Collins caused a loss of \$105,000. There was still \$19,000 of insurance which had not expired, leaving an unin-

sured loss of \$86,000 with less than half that amount in the treasury to meet it.

Warned by this disaster, the legislature amended the state-fund law, permitting the trustees of any state institution to insure it in the regular way until the state sinking fund reached \$250,000. Under this provision several state institutions are fairly well covered, but no insurance is carried on the state capitol and the state office building, with several millions of value.

A fire loss of between \$250,000 and \$300,000 was suffered at Canon City State Penitentiary as a result of a mutiny of prisoners who burned several buildings and their contents. There was little insurance in force to cover this, so that the State of Colorado has suffered losses of \$400,000 in the four years since the passage of the state-fund act, while before, at a cost of only \$31,000 a year, the state was carrying \$7,500,000 of insurance on its buildings and \$1,600,000 on contents.

GETTING FULL VALUE IN SCHOOL BUSINESS MANAGEMENT

(Continued from Page 50)

cracks in walls, need of painting, plaster condition, hinges, door checks, window sashes, cords and chains, and action of doors and windows that are movable.

3. Heating and plumbing facilities examined to determine the condition of brackets, covering of pipes, painting or bronzing, hangers, valves, radiators, and leaks.

4. Lighting equipment examined to determine the condition of switch boxes, fuse boxes, insulation of wire, and need for cleaning lamps and reflectors.

5. Plumbing fixtures, water pipes, toilets, lavatories, and drinking fountains examined to determine leaks, drain stoppages, defective pip-

Getting Started Right!

Physical examinations come first! Dependability of Anthropometric Apparatus is important. We have in stock, ready for immediate shipment, a complete line. Wire your order—or write for literature.



The Standard Wet Spirometer (illustrated) is invaluable in lung capacity measurements. It has an attractive added feature in the interest it sustains in periodic tests throughout the year. We can make immediate shipment. Send for pamphlet F 15-4 which will give you complete VITAL CAPACITY TABLES.

For more than a half century Narragansett has produced the finest in Gymnasium Apparatus.



THE NARRAGANSETT MACHINE CO.,

Providence, Rhode Island

CHICAGO
1504 Monadnock Blk.

NEW YORK
214 East 40th St.

ing, and fixtures. The need for cleaning and painting should also be determined.

6. Fire protection. Although this equipment is seldom used, it must be examined regularly to determine the condition and good working operation of all reels and valves. The condition of the hose should be determined. Hand extinguishers should be refilled regularly. Signs should be clean and readable, and easy and free access to the equipment should be maintained.

Summer Repairwork

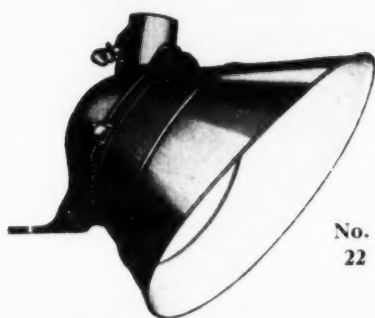
The question of the best plan for performing repairwork must be answered in the light of local circumstances. In large cities like Minneapolis, Milwaukee, Detroit, etc., the schools have a central repairshop to which broken equipment and furniture are regularly sent for reconditioning. Practically all large cities employ mechanics continuously to do emergency repairwork. In the medium-sized and smaller communities, it is frequently possible to employ a man who can do carpentry work, simple cabinetwork, and who has sufficient experience to repaint or refinish cabinetwork.

Quite a few cities employ the janitors on a 12 months' basis and organize them in groups for greater efficiency in cleaning, painting, and other minor repair jobs which are necessary during the summer. A New England school-board secretary reports that the janitor is hired regularly to do repair and repainting work. The plan of letting contracts for jobs of this kind and of hiring carpenters and special painters seems to be costing too much. Table III shows the saving which was reported in this experiment.⁷

Bid Number 1.....	\$1,612.00
Bid Number 2.....	1,688.00
Bid Number 3.....	2,534.00

⁷F. A. Scott, "An Experiment in Maintenance," SCHOOL BOARD JOURNAL, 75:50 ff., July, 1927.

And Now The Schools Play Football at Night



Enameled inside and out
Rust proof—all weather proof
Open or closed types

No.
22

HILLITE FLOOD LIGHT PROJECTOR

Here is a remarkable light. Nothing its equal has ever been produced before. A flood light that gives you the effect of real daylight—clear, far-reaching—without glare. Surely most desirable where young eyes are to be protected!

This is the achievement of Hill-Standard Diffusion Rings which break up the piercing blinding rays—of Hill-Standard Lumiscope Equipment training the light where needed—and other special features.

Write for descriptive folder. Our competent staff of flood lighting engineers is at your disposal.

"When you buy with confidence
You have thought of Hill-Standard."

Address Division S

HILL-STANDARD Co.
EST. 1900
Anderson, Indiana, U.S.A.

Largest Manufacturer of Flood Lighting, Playground, and Water Sports Equipment.

Actual cost by hiring general utility man..... 1,121.78
Saving over lowest bid..... 490.22

In the discussion by Sammis referred to above, it is reported that in many cases a crew of maintenance men — carpenters, painters, and plumbers — are regularly hired by manufacturing establishments to carry on necessary maintenance work. However, it is apparent that only the larger school systems are justified in following this plan. In each city the local situation must determine the economy and desirability of the plan.

Coöperation of School Employees

In carrying on the business of the school system, the school-business official must rely to a large extent upon the coöperation of the chief executive of the school system, the superintendent and the principals and teachers. To gain this coöperation, every employee of the school system must be made to feel that it is his duty to prolong the usefulness of equipment and to conserve supplies, because it is good citizenship as well as a professional duty. The superintendent is here the most powerful aid, and his leadership can readily show that it is not penuriousness but genuine economy and a desire to help the pupils and the schools which should lead every teacher and pupil to avoid waste.

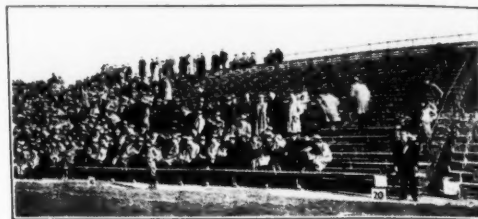
The business manager of the school will need to remind janitors and engineers from time to time of economies in the use of coal, of cleaning supplies, and of equipment. He will need to remind the teachers of the same thing, but he cannot here work directly but only through the supervisory staff. Comparative check-ups of coal consumption and of the use of other materials and supplies are effective means of checking waste.

Most school-business managers recommend strict supervision of the distribution of supplies and careful check on their use. They feel that the amount of supplies to each teacher should

be standardized and that the securing of additional supplies should be made as inconvenient a procedure as possible. It is not the duty of the school-board secretary or business manager to determine the quantity of teaching supplies which any instructor shall use. That is a work of the superintendent because he is the responsible official who must set up the educational objectives and goals and who is bound to exact an accounting in the form of instructional results. The standardization of school supplies from the standpoint of quantity is not without its difficulties, but the experienced superintendent and principal can readily determine when a teacher is achieving results and when she is merely wasting supplies. The supervisors of special subjects are similarly in position to tell when a shop or art teacher is achieving exceptional results or otherwise. In large school systems definite standards are unavoidable. In small communities tactful, persistent attention to this problem will result in coöperation from all but a negligible number of teachers.

The following is a plan reported as being used in Minneapolis for gaining the coöperation of people about the schools in one item of repair.⁸ In 1921, a rule was put into effect that every breakage of glass had to be explained in a formal report. In that year about 25 per cent less glass had to be replaced than in the year preceding. The matter of investigating the cause of each breakage seemed to be effective in cutting down what was evidently mere carelessness. The next year a rule was enforced by which the name of the person causing the breakage was reported. This rule reduced the amount of glass to be replaced another considerable amount. And in the next year the price of replacement of glass was collected from the person breaking it, unless the damage was done through an unavoidable accident. This step also reduced the amount of glass

⁸SCHOOL BOARD JOURNAL, 72:71, February, 1926. An editorial.



Wayne Type B Steel Sectional Grandstand
Wittenberg College, Springfield, Ohio

ARE YOU READY FOR
THE
FOOTBALL CROWDS?
IMMEDIATE
SHIPMENT
WAYNE
STEEL SECTIONAL
GRANDSTANDS

The Most Practical Stands Made
SAFE, DURABLE, ECONOMICAL

There's A Wayne Stand to
Fit Your School Budget

Write or Wire for Details

WAYNE IRON WORKS

Originators and Largest Manufacturers of
Portable Steel Stands

WAYNE, PENNA.

to be replaced. The entire plan was effective and probably could be used to advantage in securing more care on the part of everyone using school property in other systems.

The Attitude of the Business Management

The most effective way in which economy can be secured in the business management of schools is through the efficient attention of the business manager to well-established policies based on sound administrative principles and tempered by full understanding of local conditions. The business management of a city or town school system requires a knowledge of a vast variety of subjects. The business manager must know not only the school law, but he should have an understanding of the principles of educational legislation, of tax legislation, and in general of sound public administration. It is necessary for him to know much about building construction and management. He must have at least the theory of accounting and he should be familiar with methods of school accounting as a branch of public accounting. He must understand purchasing and stores management. He must have some notion of personnel work because he is in charge of a considerable group of engineers, janitors, and cleaners. Above all, he must understand that all of his work must be coöordinated with and subordinated to the educational purposes of the schools.

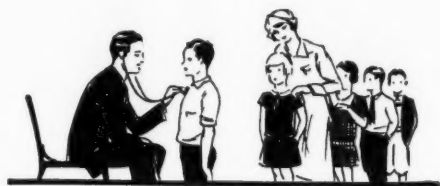
THE CLUTCH OF CIRCUM- STANCE

(Concluded from Page 52)

that the panacea for such ills was a new superintendent, a "young" man, who would "put the schools on the map." "Not that Mr. Neatem was not a fine man, etc., etc., but —"

Neatem called upon the school boards in several towns where vacancies were reported. He was received with respect, but that was all.

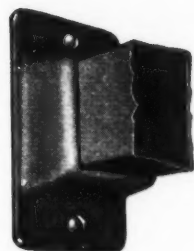
(Concluded on Page 122)



KEEP Them Healthy!



Fairfax High School, Los Angeles, Cal. A representative school in which FERROMETAL Partitions have been installed.



Head Rail
Wall
Fitting



Partition
Wall Fitting



Foot Fitting and Post

THE new school year starts! Keep your students healthy and happy. Competent physical examination helps. So does a careful "inspection and appraisal" of the toilet room facilities.

Install FERROMETAL Steel Toilet Partitions and you can forget cleanliness and sanitation worries. FERROMETAL Partitions have no places for dirt and germs to hide and spread. Washing and cleaning is done quickly, easily, thoroughly.

FERROMETAL Partitions are made sturdy and strong from 16-gauge Keystone (rust resisting) copper bearing steel. Built to withstand jolting, jarring service, year after year. No tricky hinges to pinch careless fingers. No sharp corners to tear clothing or cause injury.

Whether your school is large or small, you'll find that FERROMETAL Partitions offer the ideal combination of attractive appearance, ready adaptability, low cost. Write for literature on how to plan cleaner, finer toilet room facilities—and how space can be utilized to best advantage. Merely request—it will be sent without obligation.

MILWAUKEE STAMPING CO.
MILWAUKEE, WIS.

FERROMETAL



METAL COMPARTMENTS

MILWAUKEE STAMPING CO.
MILWAUKEE, WIS.

Mail literature with complete information on toilet room partitions.

Name _____

School _____

City _____ State _____

L. SONNEBORN SONS, Inc.
GUARANTEED PRODUCTS

NO MATTER

Whether School Keeps or Not!

... You Can Renovate with
SONNEBORN PRODUCTS
and Not Interfere with
Routine



YOU don't need to wait for vacation to make repairs on school floors or walls. You can use Sonneborn products at any time without interrupting one recitation or one study period.

Are your concrete floors crumbling and dusting? *Lapidolith* will turn them to flint-like hardness over night.

Are your wood floors splintering, rotting, wearing down? Brush on *Lignophol* in the evening, and next morning the wood will be smooth, attractive, elastic—good for many more years of life.

Is moisture creeping through your outside walls? Make them permanently waterproof with *Hydrocide Colorless*.

Do your floors need painting? *Cemcoat Floor Enamel* is recommended for all types of floors where an attractive finish is important.

No matter what you need for painting or preserving your buildings, Sonneborn has it—moderately priced, conscientiously serviced, and *guaranteed*. Our expert counsel is yours for the asking.

Note these expense-cutting preparations which are used all over America in outstanding schools and colleges.

LAPIDOLITH

—A chemical liquid hardener for preserving and dustproofing concrete floors.

LIGNOPHOL

—For finishing, preserving and wearproofing wood floors.

HYDROCID COLORLESS

—For waterproofing exterior of exposed walls.

Cement Filler and Dust Proofer

A decorative and dustproofing treatment. *Cemcoat Exterior and Interior Paints* Tough, durable floor paint that produces an attractive high-gloss finish. Various colors.

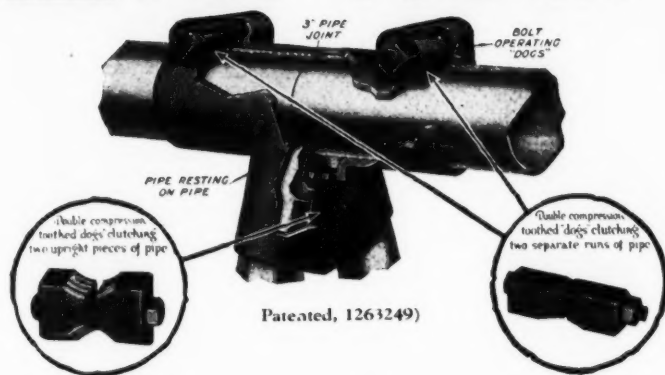
L. SONNEBORN SONS, Inc.

114 FIFTH AVENUE,
NEW YORK

Mail
Coupon for
Information

L. SONNEBORN SONS, INC., 114 Fifth Avenue, New York	ASJ-9
Please send me, without obligation, demonstration samples and literature on: Lapidolith; Lignophol; Cement Filler and Dustproofer; Cemcoat Exterior and Interior Paints; Hydrocide Colorless; (Check products that interest you.)	
Name	
Address	
Company	
Position	

EverWear



FRAME FITTINGS

THE safety of playground apparatus depends upon Frame Fittings. EverWear patented frame fittings are safest, easiest to erect, most simple, most positive, most rigid, strongest and cheapest in the long run; seven claims which are easy to prove. Write for catalog No. 23, it illustrates 255 different types, sizes and units of splendid EverWear recreation apparatus, the kind you should have.

THE EVERWEAR MFG. CO.

Box 102

Springfield, Ohio

ROCKFORD C-O-M-B-I-N-A-T-I-O-N SHACKLE LOCKS



No. 264

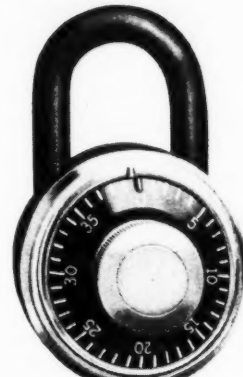
Rockford Master Keyed Combination Shackle Lock No. 264, above, makes possible convenient Master Key Supervision, and also retains the advantage of the Combination Feature.

May be had Master Keyed in series with Rockford Locker Locks, Door and Drawer Locks.

Cuts shown are two-thirds actual size.

Designed for School use, Rockford Combination Shackle Locks simplify Lock Administration and Supervision, and provide a durable, secure locking system.

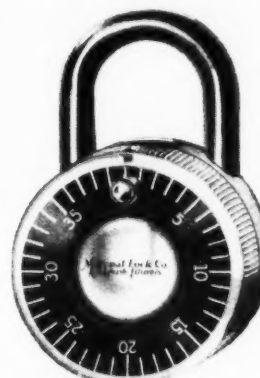
They incorporate all the desirable features of present day locks and abolish student keys.



No. 265

Rockford Combination Shackle Locks No. 265, above, (Keyless) and No. 266, at left, (Keyless) are recommended wherever a Keyless system is desired.

To guard against student's carelessness all Rockford Combination Shackle Locks are equipped with Self-Locking Feature. Insert the Shackle; the Lock is locked. To re-open it is necessary to re-dial.



No. 266

National Lock Co.
Rockford, Illinois

(Concluded from Page 120)

A young man, with a master's degree and special training, was wanted, they said.

The other day, a fellow salesman, driving past the western slope of the state university campus at sundown, came upon him gazing up at the towers of Old Central. He stood for a long time, the glow of the evening sun reflected upon his face. Seeing that he was observed, Neattem squared his shoulders, put on his hat, and quickly drove away.

CHECK LIST OF STEPS USED IN SCHEDULING A MODERN HIGH SCHOOL

(Concluded from Page 61)

VI. Starting the New Semester

1. Arrange a first day's program that will allow for a long homeroom period and very brief class periods for organization purposes. If possible print this in the first day's paper or mimeograph for teachers. Call the roll in the classes having the students answer by homeroom numbers. Allow the first afternoon for faculty meetings, the purchase of textbooks and supplies and other routine matters.

2. Arrange a plan of checking students' against office schedules to detect errors if students' names did not appear on class rolls.

3. Arrange a set-up for correcting errors. Students should make a copy of their programs if in error, submit their schedules to the office with a "Correction of Schedule" slip, giving necessary data and signed by the homeroom teacher. Correct these through centralized inspection and delegated assignment.

4. Equalize serious differences in section numbers, dropping or adding sections when necessary, sending "Drop" or "Add" notes to teachers affected when shifting is done, and then the school may be considered fully organized.

JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS

(Continued from Page 55)

The library is placed in the center section of the second floor and has adjacent two consulting

rooms for the use of special classes or special assignments.

The cafeteria occupies the space directly above the library. The kitchen has all modern equipment, electric refrigerators, dish-washing machines, potato peeler, and mixers. The dining hall proper is equipped with linoleum-top, lacquer-finished tables and bentwood chairs, and accommodates approximately 300 students.

The building is enrolling approximately 900 pupils and is so constructed that it may be doubled in size without further excavations and without interfering with the present architectural symmetry of the structure.

JOHN DEERE JUNIOR HIGH SCHOOL, MOLINE, ILLINOIS

Construction Data

Dimensions	143 ft., 3 in., by 359 ft., 3 in.
Site area	12½ acres
Cost of site	\$14,000.00
Cost of concrete piles	\$35,000.00
Cost of building	\$469,090.00
Cost per pupil accommodated	\$418.00
Cost per cubic foot of building	26.2 cents
Pupil capacity	1,200
Cubic feet in building	1,800,000

Analysis of Floor Space Distribution

	Total sq. ft.	N.E.A. Standard of Percent-ages	John Deere Percent-ages
1. Stairs and corridors	16,015	20	16.52
2. Administration	10,830	16	11.20
3. Walls and partitions	9,440		
4. Flues	767	14	17.78
5. Accessories	7,893		
6. Instruction		50	54.5
Total floor space	97,685	100	100.00
Instruction Rooms			
Classrooms	21		
General science laboratory	2		
Workroom	1		
Music room	1		
Bookkeeping	1		
Art	1		
Cooking	2		
Sewing	2		
Fitting room	1		
Mechanical drawing	2		
Woodshop	1		
Machine shop	1		
Gymnasium (dividing door)	1		
Noninstruction Rooms			
Toilets	20		

Offices	9	
Cafeteria	1	74 ft. by 64 ft.
Gymnasium dressing rooms	2	
Stage dressing rooms	2	
Shower rooms	3	
Rest rooms	2	
Medical suite	2	
Heating and power plant	1	
Locker rooms	2	
Model room	1	22 ft. by 22 ft.
Library	1	32 ft. by 50 ft.
Auditorium	1	67 ft. by 90 ft.
Community room (with stage)	1	22 ft. by 41 ft.

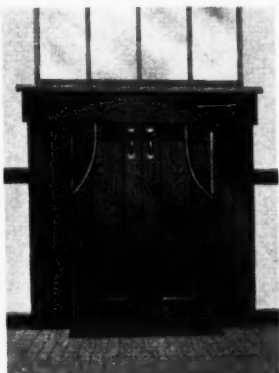
IMPORTANT NEW PUBLICATIONS

Columbia Research French Test. Prepared by Louise C. Seibert and Ben D. Wood. Published by the World Book Company, Yonkers, N. Y. This test, which has been designed to measure the extent to which students understand spoken French, has involved a careful selection of functions to be tested, a choice of relevant content for measuring these functions, as well as of the extent to which the test differentiates between levels of achievement. The material includes a manual of directions, a test form, a test sheet, and a key giving directions for making the test and for scoring the results. The test is a worth-while contribution to teachers of French and to the field of educational measurement, since it is the only test that measures ability in aural understanding of the subject.

Hearing and the School Child. By John L. Waldman, F. A. Wade, and C. W. Aretz. Paper, 222 pages. Issued by Temple University, Philadelphia, Pa. A study of hearing, school progress, and achievement of school children. This survey limited itself to a partial consideration of these points: (1) To what extent does partial deafness exist? (2) What effect does impaired hearing have upon school progress? (3) What is the effect of impaired hearing on achievement in the several subjects of the school curriculum? The data which covered 1,079 children in grades four to eight inclusive, included such items as sex, race, age, grade, retardation, grade repetitions, conduct marks, attendance, routine hearing, estimates of hearing defects, subject-achievement quotients, speech defects, case studies of deafened children, and a statement of foreign-language disability. The study shows that the percentage of white children whose hearing is impaired exceeds that of the colored children, and that there is a higher percentage of girls than of boys with impaired hearing. The report reveals that hearing is of major importance in its relation to the education of children. A child with impaired hearing requires education adapted to his particular needs. The survey and its relation to

(Concluded on Page 124)

BUTLER



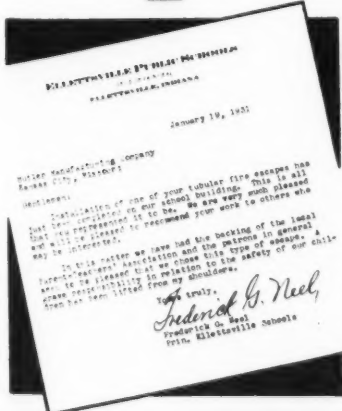
TUBULAR FIRE ESCAPE



Rescue 120 CHILDREN per Minute

ELLETTSVILLE, Indiana, builds its schools of the famous Indiana Limestone. Yet Frederick G. Neel, the Principal, in writing about the installation of a Butler Tubular Fire Escape, says: "A grave responsibility in relation to the safety of our children has been lifted from my shoulders." Masonry construction lessens the fire hazard, to be sure. Nevertheless, the possibility of fire is always present. Fire itself may never get beyond the basement and still perish or cripple scores of children through smoke suffocation, gassing, and what is worse PANIC, which crushes and tramples more victims than ever actually burn.

Through the Butler Tubular Fire Escape, 120 children per minute can slide to safety, protected all the way. Ice and snow cannot block their escape. The pressure of a child's foot on the patented treadle of the exit swings the doors wide open. Children or grown-ups swing from the handy side bars into the mouth of the tube. Lift that responsibility from your shoulders now. Send for complete information on the safest and most rapid escapeway.



Approved by the National Board of Fire Underwriters.

BUTLER MANUFACTURING COMPANY

1255 EASTERN AVE.
KANSAS CITY, MO.

955 SIXTH AVE., S. E.
MINNEAPOLIS, MINN.

Send complete information about the Butler Tubular Fire Escapes and about your free survey service. ☐ Check here if information on super-septic sewage disposal is desired.

Name..... Title.....
P. O. State.....



G&G Model E Electric Hoist in use. Note how sidewalk opening is fully protected by G&G Sidewalk Doors with Swing Guard Gate.

CHANGE OVER TO ELECTRIC

If ashes, garbage and rubbish are being removed from your school with hand power hoist equipment, change over now to *electric* power. This can be done at reasonable cost. We will make an allowance on your present hoist and install one of the new low-cost G&G Electric Hoists in the same area. If cans are to be deposited on sidewalk, the Model E should be used. If cans are to be emptied directly into truck without rehandling at grade, the Model D should be installed. Both Hoists permit of complete operation by one man.

The cost of current consumption is negligible. We will be glad to furnish engineering test data showing just how small is the power cost for operating a G&G Electric Hoist.

Check up, too, on your sidewalk opening. If not properly protected it invites accidents. Ask for details of our sidewalk doors with swing guard gate, absolutely safeguarding the opening and fully automatic in operation.

Write for illustrated catalog.

The
G&G
ELECTRIC
TELESCOPIC HOIST
With Automatic Stop and Gravity Lowering Device

GILLIS & GEOGHEGAN

65 Years of Service

551 West Broadway

New York, N. Y.



WILL YOU GIVE THEM THIS Extra Health Protection?



THE U. S. Bureau of Education states that eyestrain in children is due in many instances to bad lighting in classrooms. Excessive light and glare may seriously affect the mental and physical well-being of the children in your care. To eliminate classroom eyestrain, equip your school with *adjustable window shades* . . . shades that can be drawn up or down . . . that cover just the window area necessary to shut out excessive light and the sun's glare.

Draper shades are made with the famous easy cleaning, long-lasting DRATEX Cloth—a pliable, remarkably strong fabric of uniform texture, guaranteed not to crack or “pin-hole”.

Give your students the eye protection that Draper Adjustable Shades afford—for they may be let down from the top, admitting the valuable *top light*, which is always the *best light*. Made from special Dratex shade cloth, these shades keep out all glare but admit a maximum amount of soft, luminous light.

Equip your new school . . . or re-shade your old school with Draper Adjustable Shades . . . America's most widely used school shades. Interesting literature and sample of Dratex cloth sent free to educators. Please address Department A. A.

THE BEST LIGHT ENTERS THROUGH
THE UPPER THIRD OF THE WINDOW

**LUTHER O. DRAPER
• • • SHADE CO.**

MAKERS OF BETTER SHADES FOR
OVER A QUARTER CENTURY

SPICELAND . . . Dept. A. A. . . . INDIANA



*"I Hate to Break
that
Lock"*

School officials everywhere are eliminating the vexing and costly daily problems of lost and misplaced keys by the installation of «

TELKEE
TRADE MARK

the visible Key-Filing — Key-Finding System

which is now serving thousands of Schools and Colleges for the Positive Control of Keys. The TELKEE System protects all keys in steel filing units « controlled under one lock by persons with authorized access. Write for descriptive folder.

Thayer **TELKEE** Corporation

114 E. 17th Street, Los Angeles, Calif.

(Concluded from Page 122)

school progress and achievement was considered as suggestive of a method of procedure in detecting hearing losses and in analyzing their educational implications. It indicates a need for medical or surgical treatment of the partially deaf, and it makes an appeal for proper educational facilities for the hard of hearing.

The Influence of Training on Changes in Variability in Achievement. By Homer B. Reed. Paper, 59 pages. Issued by the Psychological Review Company, Princeton, N. J. The purpose of this study was to find the influence of training on changes in variability, or if equal training makes a group of individuals more alike or more different in their achievement. The author points out that the farther apart two individuals are in achievement, the greater the probability is that the difference between them will be reduced by equal practice. The amount of reduction in variability is largely a function of the amount of gain during the period of practice. Inequality in achievement in school subjects and in motor skill, he says, is reduced by giving pupils and students an equal opportunity to learn. It appears that heredity has been overemphasized as a factor in explaining individual differences in achievement.

Validating and Testing Home Economic Content. By Louis V. Newkirk. Paper, 39 pages. Bulletin No. 4, April 15, 1931. Issued by the University of Iowa, Iowa City, Iowa. The present study was begun to determine whether a pupil has a high general mechanical intelligence, whether a high score merely means an achievement in home mechanics, and also to indicate what a low score means in a test on the subject. The study gives the results obtained in a test of 48 pupils taking shopwork at the University of Iowa High School. The data indicated that if a pupil makes a high score on the Newkirk-Stoddard test, he has mechanical intelligence, high I.Q., and a knowledge of the outstanding home-mechanics jobs. There was no significant positive correlation between the Stenquist Mechanical Aptitudes Test and the Newkirk-Stoddard Home Mechanics Test. Both of the tests gave a low, but positive, correlation with I.Q., and there appeared to be a positive correlation between the scores made on the test and the marks given by the shop teachers.

Leonard Diagnostic Test in Punctuation and Capitalization. By J. Paul Leonard. World Book Co., Yonkers, N. Y. The Leonard diagnostic test is a test in punctuation and capitalization and may be used to advantage from the fifth to the twelfth grades. It includes the test proper, directions for giving and scoring the test, instructions in interpretation, and a list of norms.

Engle-Stenquist Home Economics Test. By Edna M. Engle and J. L. Stenquist. World Book Co., Yonkers, N. Y. The purpose of this test is to provide an objective measure of a pupil's knowledge in the several fields of home economics. It includes directions for administering and scoring the test, a list of norms, and an interpretation of test results.

Wiedefeld-Walther Geography Test. By M. Theresa Wiedefeld and E. Curt Walther. World Book Co., Yonkers, N. Y. The test offers a comprehensive and scientific method of testing the mastery of pupils in the abilities, skills, and information that are the aims of the teaching of geography in grades four to eight. It contains a manual of directions, with key for scoring, and a class test and is intended to be of practical value in a careful application of the results.

Organization and Functions of Research Bureaus in City School Systems. By Edith A. Wright. Leaflet No. 2, February, 1931. Issued by the U. S. Office of Education, Washington, D. C. The information given in the report shows the present situation in regard to organized research bureau in city school systems, as to their functions and staff. It shows the rapidity with which research bureaus have become a factor in school systems, which should be of interest to cities contemplating the organization of such bureaus.

Geographic Distribution of Students in 363 American Colleges and Universities. By C. R. Foster and Paul S. Dwyer. Studies in Education, No. 1, Rutgers University School of Education, New Brunswick, N. J. This comprehensive study raises important questions concerning the location of the “national” universities, the drawing power of institutions based on their scholastic standards, athletics, etc.

Size of Classes in 157 Cities. Circular No. 6 of the Educational Research Service, National Education Association, Washington, D. C. An accurate picture of the present situation.

State Publication of Schoolbooks. By John Franklin Brown. Paper, 56 pages. Published by the Macmillan Company, New York City. In two of the 48 states of the Union—California and Kansas—part or all of the textbooks used in the schools are published or printed by the state. The pamphlet presents the pros and cons of the matter of state publication. In his conclusion, Mr. Brown points to the findings of Dr. Percy R. Davis relative to the disadvantages of state publication, and to the conclusions of the committee of twelve which prepared the thirtieth yearbook of the National Society for the Study of Education in February, 1931.

Publications on Radio in Education. The publication of information series in small pamphlet form has been inaugurated by the National Advisory Council on Radio in Education, whose headquarters are located at 60 East 42nd St., New York City.

Four numbers have thus far been issued. One of these deals with the broadcaster and the librarian. The writer, Francis K. W. Drury, points out what local public libraries may offer in the way of broadcast material. He also outlines educational programs.

Another of the series concerns itself with research problems in radio education. Here a number of suggestions are made which concern themselves with the objectives of radio education, administration of broadcast stations, methods of presentation, the pupil and his learning, etc.

The Bonded Debt of 257 Cities as of January 1, 1931. By C. E. Rightor. Issued by the Detroit Bureau of Governmental Research, Detroit, Mich. This study shows the relation of school bonds to general municipal debts. It makes available in concise form a statement of the total amount of bonded debt outstanding as a liability against the property and citizens of each city.

The Effect of Unfamiliar Settings on Problem-Solving. By William A. Brownell and Lorena B. Stretch. Bulletin No. 1, 1931, Duke University Press, Durham, N. C. This study was made in the schools of Birmingham, Ala., with funds furnished by the George Peabody College for Teachers. Arithmetic problems may be analyzed from several different points of view. The present investigation sought to control all of the five features or parts of the problem comprising the problem. It was planned to extend the range of familiarity of setting and to measure the influence of four instead of three degrees of familiarity. The four tests were given at intervals of about two days, and forms were devised to permit the recording of all data for each child on the same blank. The findings in the study should be of some significance for determining the kinds of problems to be printed in arithmetic textbooks. The data secured in the study appear to offer no ground for reasonable belief that the problems are made unduly difficult for children through unfamiliar settings, except under certain circumstances which are noted. It was pointed out that the rôle played by familiar as opposed to unfamiliar problem-settings will not be adequately understood until the final outcomes of arithmetic instruction receive at least as much consideration as is now accorded the immediate outcomes of children's interest and of the difficulty of problems.

BETTER EQUIPMENT *for your* STAGE

Distinctive Quality
and
Service at a Reasonable Cost.

Write

Twin-City Scenic Co.

2819 Nicollet Ave.,
Minneapolis, Minn.

2310 Cass Ave.
Detroit, Mich.

Just common sense



This fire progressed so fast that the two hundred children who slid safely from the second floor, had no time to get lunches or wraps. Two and one-half minutes after the alarm, they were all out. Plain common sense tells us that trying to use the center hallway or an ordinary type of fire escape could easily have resulted in a panic or a terrific loss of life from crushing, smoke, gases or burns.

POTTER Manufacturing Corporation
TUBULAR SLIDE 1858 Conway Bldg., Chicago
Fire Escape Over 3,150 Potter Tubular Slide Fire Escapes now in use, many with service records and no death or injury reports.

HOLDFAST
All Metal Shade Roller
"NO TACKS-NO TOOLS"



**YOU
CAN
NOT
PULL**
the shade off
A Hold-Fast
Metal Roller—
BUT

You can slide a damaged shade out and a new one in as easily as sliding a curtain on a round rod. YOUR DEALER can furnish you Duck, Kanvas, Oil or Washades and Maps mounted on the NEW WAY Hold-Fast Metal Rollers. The price for Metal Rollers is no longer a barrier.

Make your Roller Equipment Permanent by Specifying Hold-Fast Metal Rollers.

If your dealer cannot supply you write us for samples and prices.

CHAS. W. RICE & CO.

Shade Specialists
UNION CITY, INDIANA



If Interested In Locker Padlocks

Wait!

FOR 42 years we have made keyless locks — millions in use are now giving satisfactory service in schools, colleges, academies and gyms all over the country.

But We Have a New One

soon to be offered to the educational institution. It embodies all former advantages plus features found in no other lock on the market. It is positively THE LAST WORD in a school lock.

Watch for Announcement of Details in This and Other Leading Educational Publications

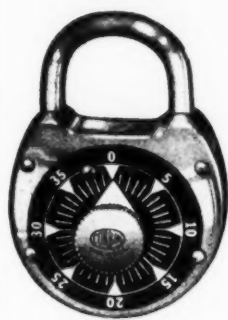
THE J. B. MILLER KEYLESS LOCK CO.

204 Lock St. (Dept. B) Kent, Ohio

(If your needs are urgent, however, use this coupon for further information)

THE J. B. MILLER KEYLESS LOCK CO.,
204 LOCK ST. (DEPT. B), KENT, OHIO
Gentlemen:

We are interested in learning more about your new Keyless lock and service for educational institutions.
Name of School or College.....
Name of Individual.....
Address.....
City & State.....

"DIAL"

Cut About 1/4
Actual Size
No. 9920

**Combination Padlocks**

Simplicity in Operation Fool Proof
Lock Automatically Rust Proof

Constructed of all brass or steel, black japanned or cadmium plated. Especially designed for use on school lockers and on gymnasium wire suit baskets. These locks cannot be left unlocked because the combinations are completely thrown off when the shackles are snapped shut.

"CLICK"

Non-Sight
Operation



Cut About 1/4
Actual Size
No. 9930

With every installation, master charts are furnished for recording names, lock numbers and combination numbers.

Inform us of your particular problem that a solution of your requirements may be determined. A sample "Click" or "Dial" lock will be sent gratis upon request to school executives.

Letter Boxes for Schools Key and Combination

No. 85 COMBINATION LETTER BOX

Made in 3 sizes.

Cast Bronze, regularly finished medium statuary. Dials etched, figures raised on black background. Combinations all different.

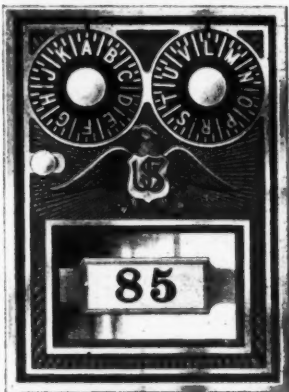
No. 1702A KEY LETTER BOX

Cast Bronze, medium statuary finish. Pin tumbler lock. 3 keys with each letter box. Key changes practically unlimited.

Size 5 1/2 x 6 1/4 inches.

All boxes furnished with pigeon holes of various depths. Send for catalogue No. 57.

Manufacturers of letter
boxes for 50 years.



Size 3-2/3 x 5 inches.

CORBIN CABINET LOCK COMPANY

The American Hardware Corporation, Successors

NEW BRITAIN, CONN., U. S. A.

NEW YORK
96 LaFayette St.

CHICAGO
319 W. Randolph St.

PHILADELPHIA
405 Commerce St.

Distinctive Design

Special Low Prices on Stage Drapery

Due to a fortunate purchase of a lot of fine fabrics and a desire to keep our work rooms busy, we are temporarily quoting special discounts. For an estimate write our nearest studio.

Buy Now! Save Cost and Secure
Better Quality and Service —

ARMSTRONG STUDIOS, Inc.

1717 CORDOVA ST., LOS ANGELES, CAL.
14 W. LAKE ST., CHICAGO, ILL.

Quality of Fabric

School Board News

♦ St. Paris, Ohio. The school board has opened a bookstore for the sale of second-hand books. Students having books which they wish to sell bring them to the bookstore. No fee is charged for selling used books. All sales are for cash.

♦ Pontiac, Mich. The school board has been asked to approve a suggestive schedule of rates, with a minimum and maximum salary for the various classes of work performed in the maintenance and operation department. The schedule is as follows:

Heating, Ventilating & Plumbing.	60-70c per hour.
Carpenters	60-70c per hour.
Painters	60-70c per hour.
Bus & Truck Drivers	50-60c per hour.
Stockroom	50-60c per hour.
High-School Engineer	\$2,000-\$2,100 per yr.
Junior-High Engineers	65-75c per hour.
Combination Janitors & Engineers.	55-65c per hour.
Janitors	50-60c per hour.
Firemen	45-55c per hour.
Full-time Matron	35-45c per hour.
Janitress — 10 months	25-35c per hour.

3. The committee recommended that where employees are required to use their own cars in the work in which they are engaged, they be given \$160.00 per year (2,000 miles at 8c).

4. The committee recommends that these suggested rates should be made up into monthly salary schedules.

5. The committee recommends that no contracts be made with these employees and that the provision of 10 days' sick leave with pay should be discontinued but that the two weeks' vacation with pay should be continued.

♦ Sparta, Wis. The city council has approved an ordinance, providing for a new plan of conducting the schools of the city and a new board of five members, to be elected at the regular spring election. The ordinance will be submitted to a referendum vote of the people at the fall election. The new plan will place all members of the school board on the same basis as regular elective city officers. The candidate receiving the greatest num-

ber of votes will serve on the school board for three years; the two receiving second and third will serve for two years; the fourth and fifth will serve one year, and thereafter those elected to the board will serve for a three-year term.

♦ Brainerd, Minn. The school board has retained its rule, forbidding trespassing or loitering on school grounds and property after 9 p.m. The board has asked the assistance of the police department in enforcing the rule. The action was taken to prevent vandalism and to discourage children from loitering on the grounds at a late hour.

♦ Monticello, Ind. The school board has established a schoolbook exchange for the students of Monticello and Union townships. Since there has been no change in textbooks for the next year, it is believed that many pupils will take advantage of the book exchange.

♦ St. Joseph, Mo. The board of education has adopted new rules, giving to Supt. F. H. Barbee full control over all departments of the schools, including the superintendent's, the engineer's, and the business department. The new plan, which is intended to eliminate conflicts and permit of a more satisfactory administrative system, displaces an old plan under which each of the three departments was conducted separately. Under the new plan, the janitors will work under the principals, who, in turn, will be under the direction of the superintendent.

♦ Lorain, Ohio. The school board has been asked to approve a recommendation of Supt. D. J. Boone, providing for a new plan of operation for the school cafeteria.

♦ Dayton, Ohio. The school board has been criticized for alleged overcharging for the use of school halls as meeting places. Complaints were made to the board because the new schedule of rates is from 3 to 5 cents higher than the actual cost for janitor service, heat, and light. Objection was made to the new rates for the reason that the

state law allows only bare expenses to be assessed against civic groups desiring to use school auditoriums or other rooms.

♦ Attorney-General Bettman of Ohio, in a recent opinion, has ruled that while a board of education may not be held legally liable for injuries suffered by a pupil injured in a manual-training shop, the board may recognize a moral obligation and pay a claim for damages from public funds. In such a case, the circumstances must be such that the board would have been liable if not protected by the rule of nonliability of governmental agencies acting in governmental capacity.

♦ Dover, Ohio. The new school census shows an enrollment of 2,451, or a gain of from 2 to 3 per cent over a year ago. Of this number, 450 pupils are of high-school age.

♦ Butte, Mont. The school board of School District No. 1 has voted to dispense with women janitresses, and to employ only men who are members of the organized union. The action was taken because it was believed that the public money should be spent where it will do the greatest good to the greatest number of citizens.

♦ Glouster, Ohio. Teachers of Trimble township were recently paid one month's back salary. Funds sufficient to pay all the teachers were sent out. The teachers will be compelled to wait for another month's salary which is still due them.

♦ "Let us hope that no board of education will be so short-sighted as to impair the quality of instruction which they are giving their children simply because the spirit of retrenchment is in the air at the present time," said State Supt. Francis G. Blair, of Illinois, in a recent bulletin addressed to school officials. "While teachers should be considerate and not demand the impossible, boards of education should also be considerate and do the very best that is possible under the circumstances to maintain the present standard."

♦ William F. Woodward, a member of the Portland, Oreg., school board, has voiced his disapproval of the practice of teachers bidding for jobs during the vacation months. "They compete," he said, "with those who need jobs more than the teacher does. It works an injustice."

How to vitalize Latin classes

MODERN LATIN CONVERSATION

Translated from the German of George Capellanus, Ph.D.

By BERTRAND F. KRAUS, M.A.

Latin students can learn to talk about the weather, their homes, their games, the radio, etc., in Latin, for the exercises in this book are centered about the daily actions of the student. An opportunity to *humanize* the study of Latin, and to do some effective teaching. Price, \$1.16.

Write Dept. A.S.B.J. for a copy on ten days' approval.

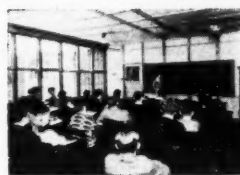
The Bruce Publishing Co.

New York - MILWAUKEE - Chicago



BRIGHT, AIRY, QUICKLY ERECTED SCHOOL BUILDINGS

insulated against Heat and Cold



Circle A buildings provide attractive quarters that solve many school housing problems. Class rooms . . . gymnasiums . . . lecture halls . . . chapels . . . all can be erected in a few weeks' time, to stand permanently or be moved whenever desired.

Cost is moderate. Construction is stronger than most frame buildings. Four-layer thick walls provide protection against both heat and cold. Write today for illustrated catalog showing over 50 building illustrations, plans, and data.

CIRCLE A PRODUCTS CORPORATION
600 S. 25th St., Newcastle, Ind.

Also manufacturers of: Circle A Folding Partitions, Rolling Partitions, School Wardrobes, Steel or Wood Portable Bleachers, Portable or Permanent Steel Grandstands

CIRCLE A SCHOOLS

Portable

♦ The Wheaton, Ill., school board will purchase schoolbooks and rent them to the pupils at a nominal figure. It will also be understood that all books will be under the supervision of teachers, and any damage or defacing above ordinary wear will be charged against the pupil causing such damage.

♦ A new rule adopted by the Alton, Ill., board of education provides that "teachers, janitors, or other school employees whose duties bring them into contact with school children and who are new to the school organization will be required to furnish certificates of health before assuming their duties."

♦ Bellecenter, Ohio. The board of education reduced the school term from nine to eight months. The teaching staff of Fremont, Ohio, has been reorganized with an annual saving of \$3,400 in salaries.

♦ The board of education of Racine, Wis., located in an old school building, will take up its new headquarters in the new city hall.

♦ The school board at Proctor, Minn., has recently made a radical change in its administrative policies. The standing committees, which for many years carried on the practical work of the board, have been abandoned and the executive functions of the board have been conferred upon the superintendent of schools and upon such other employees as the board has designated. The board will in the future act as a unit and all the recommendations of the superintendents and others will be acted upon by the board sitting as a committee of the whole or as the legal body.

♦ The voters of District No. 10, Greenport, Long Island, recently voted to purchase a new school site. A new building to take care of both elementary- and high-school departments will be planned for the site. The cost of the site was \$39,300.

♦ The new Parker junior high school, Chicago, Ill., cost \$2,286,313. The governor's tax conference committee in a recent report asserts that this is by \$500,000 too high. In comment thereon the *Chicago Tribune* says: "That was the political percentage in one school building. It was the take permitted in one instance, and if applied to one year's building program would be about three and a half million

dollars. In the case of the Parker school, nearly a fourth of the cost is accounted for by a political levy on the building fund."

♦ At Galesburg, Ill., it is urged by the city council that the school-board elections be changed to coincide with the general city elections.

♦ The school board of Waukesha, Wis., will invest \$1,000 in textbooks to be given to poor pupils on a rental plan. The book-rental plan, the superintendent explained, was not an administrative measure, but one suggested by the parent-teacher association of the city. The school board in recommending that an appropriation be made for purchasing books thought the plan was a good one, but also believed that the city council should decide whether or not it could be afforded at this time.

♦ Motion pictures in primary and secondary education afford an increased interest in the topics studied, is the conclusion drawn from a survey made by the motion-picture division of the Department of Commerce, Washington, D. C. E. I. Way, chief of the industrial and education section, says: "Other advantages cited to which favorable responses were given include a quickened originality and a larger participation in project work and other self-activities; an increase in the quantity and an improvement in the quality of the material which they read; a marked improvement in range and accuracy of vocabulary; an ability to concentrate mental activities, to think more accurately, and to reason more soundly; a clearer appreciation of the richness, accuracy and meaningfulness of personal experience; and a greater facility in correlating features of their lessons with community conditions."

♦ The voters of Duluth, Minn., in July, approved a bond election for \$199,500, and the board of education has sold the bonds recently on the basis of 3½ per cent interest and a premium of \$270.

♦ The board of education at Otsego, Mich., is replacing the high-school building which burned in January, 1931. The new building will contain the latest improvements and equipment for high-school use and will be ready for occupancy during the second semester. A portion of the old building which was only slightly damaged has been completely renovated. The auditorium-gymnasium has

been given acoustical treatment. Sessions of the high schools have been held in elementary-school buildings, local churches, and the American Legion building.

♦ The board of education at Otsego, Mich., has added three teachers to the staff. A total of 60 per cent of the staff attended professional summer school or engaged in extensive summer travel. The board of education has continued all teachers on the salaries which obtained during the 1930-31 school year.

♦ The right of the governor to fill school-board vacancies recently came into question in Kentucky. The vacancies in the Salt Lick board of education were filled by the governor. The circuit judge of Owensville ousted them, authorized the two hold-over members to appoint two members and the four jointly to appoint the fifth. William Kantz and Thomas Roberts were of the old board who appointed E. L. Kercheval and C. L. Slaton.

EDUCATION AND INDIVIDUALISM

All of the best progressive schools and school systems, from the time of Plato to the time of Lindbergh, have given careful attention to individual pupils. In the peripatetic manner of the Greeks, the pupil and teacher, as they walked through the groves and about the temples, learned to know each other in terms of individuality. The instructor having an understanding of the individual's capacities and limitations endeavored to draw him out in the educational process to a larger participation in more discriminating thought processes. So it is today when the capable teacher and the open-minded pupil work together. The educational activity becomes a drawing-out, a development of the individual's innate capacities, an application of truly progressive methods, yet methods reaching far back into times of ancient history. — S. Monroe Graves, Superintendent, Wellesly, Mass.

Teacher Agencies

TEACHERS—The WATCHWORD of AMERICA is OPPORTUNITY
SEEK IT THROUGH THE
GREAT AMERICAN TEACHERS' AGENCY
Successor to
THE PENN EDUCATIONAL BUREAU
Established 1880—51st Year
205 North Seventh Street P. O. Box 157 Allentown, Penna.
Member National Association of Teachers' Agencies

• **IF** YOU ARE LOOKING FOR A POSITION
YOU WANT TO MAKE A CHANGE
YOU HAVE A POSITION OPEN
WE ARE IN A POSITION TO SERVE YOU
ALLIED PROFESSIONAL BUREAUS
Marshall Field Annex Chicago, Ill.

ITHACA TEACHERS AGENCY
PERSONAL SERVICE
Free to School Officials
130 BLAIR STREET ITHACA, NEW YORK

ALBERT Teachers' Agency
Still under same active management. Best Schools and Colleges permanent clients. Best qualified men and women on our available list. Prompt service.
25 East Jackson Blvd., Chicago
535 Fifth Avenue, New York
Peyton Bldg., Spokane, Washington
York Rite Temple, Wichita, Kansas
Established 1885

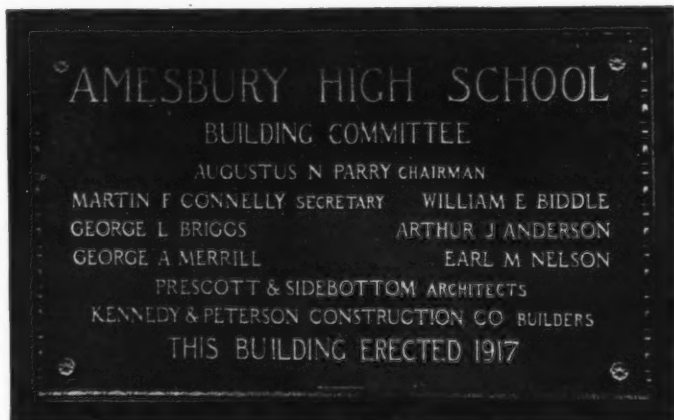
STAGE EQUIPMENT

For

Schools — Auditoriums — Colleges
Years of Experienced and efficient methods are at your command.
Full particulars will be gladly sent you.

Draperies — Scenery — Rigging

I. WEISS & SONS, INC.
445 W. 45th St. NEW YORK CITY



HONOR ROLLS—MEMORIAL TABLETS—IN BRONZE
MODELED, CAST AND FINISHED BY
ALBERT RUSSELL AND SONS CO.
125 MERRIMACK ST. NEWBURYPORT, MASS.

Fisk TEACHERS AGENCY CHICAGO
C. E. Goodell, A. M., LL. D., Colgate University, President and Gen. Mgr.
We make contact with the best teaching talent—and find the best teaching positions. In every department—from primary through college—experienced placement authorities are at your command. All have intimate knowledge of both employers' and teachers' needs. They will give you a new conception of intelligent placement service. Write now for Registration Blank.
Address 857 Steger Bldg., Chicago, Ill.

INTERSTATE TEACHERS' AGENCY
T. H. Armstrong, Mgr.
533 Genesee Valley Trust Building Rochester, New York
Twenty-five years experience. Write for information.
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

SCHOOL PHYSICIANS, DENTISTS, NURSES
"Our Service is Designed for YOU"
"PLACEMENT A SPECIALTY"
CENTRAL REGISTRY FOR NURSES
NATIONAL PHYSICIANS' EXCHANGE
THIRTY NORTH MICHIGAN AVE., CHICAGO

TEACHERS WANTED For Schools and Colleges—Every day of the year
D. H. Cook, Gen. Mgr.
NATIONAL TEACHERS AGENCY, INC.
Home Office—Philadelphia, Pa.
BRANCH OFFICES
Pittsburgh, Pa., Syracuse, N. Y., Northampton, Mass., New Haven, Conn., Cincinnati, O., Bowling Green, Ky., Jacksonville, Fla., Washington, D. C.
Positions waiting—correspondence confidential.

COLLEGE GRADUATES AND TEACHERS OF SPECIAL SUBJECTS
recommended exclusively. Report your vacancies now. 30th year. Leading bureau for teachers of commercial, industrial, and physical education.
SPECIALISTS' EDUCATIONAL BUREAU
320 N. Grand Blvd. ST. LOUIS, MO.
Member National Association of Teachers Agencies.

Schermerhorn Teachers' Agency Established 1855
CHARLES W. MULFORD, Prop.
366 Fifth Ave. between 34th and 35th Sts. NEW YORK
Branch Offices:
1086 Union Trust Bldg., Pittsburgh, Pa.
1836 Euclid Ave., Cleveland, Ohio.
A Superior Agency for Superior People. We Register Only Reliable Candidates.
Services Free to School Officials.
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

ALBANY TEACHERS' AGENCY, INC. Established 1885
74 Chapel Street, Albany, N. Y.
Provides Schools and Colleges with Competent Teachers
Assists Teachers in Securing Positions
WILLARD W. ANDREWS President F. WAYLAND BAILEY Secretary
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

STAGE SCENERY

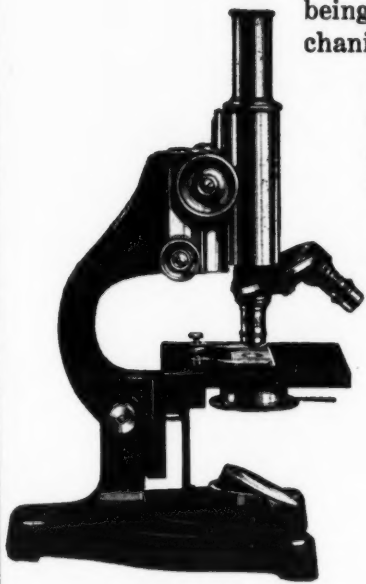
One Curtain or
A Complete Stage Equipment

Tell us your Stage Scenery Problems
and let us solve them for you.

UNIVERSAL SCENIC STUDIO, INC.
1218-24 No. Fifth St.
MILWAUKEE, WISCONSIN

LEITZ

New School Microscopes



MODEL "LL"

Aside of the Leitz Microscopes being endowed with superior mechanical and optical features,

the Model "LL" is now furnished with a stand of enlarged design and extreme ruggedness.

The culmination of such features assures any school of the best serviceable equipment when a Leitz Microscope is selected.

The prices for these new constructions have not advanced; they range, depending upon the equipment,

from \$47.75 to \$113.50.

We grant a 10% discount to educational institutions.

WRITE FOR PAMPHLET NO. 1168 (DD)

E. LEITZ, Inc.

60 EAST 10TH STREET,

BRANCHES:

NEW YORK, N. Y.

Pacific Coast States: Spindler & Sauppe, Offices at San Francisco and Los Angeles, Calif.
Chicago District: E. Leitz, Inc., 122 So. Michigan Ave., Chicago, Ill.
Washington District: E. Leitz, Inc., Investment Bldg., Washington, D. C.

«APSCO»

AUTOMATIC PENCIL SHARPENERS

Have No Competition in Quality



For long life, for satisfactory service and for real value American School Boards have proven for themselves the superiority of «APSCO» Automatic Pencil Sharpeners

*«APSCO» Cutters Cut Clean
They Don't Scrape—They Cut*

Deeply undercut and hollow ground to a razor edge «APSCO» Cutters make thousands upon thousands of pencil points before showing any signs of wear.

It's only a question of which «APSCO» Model best meets your needs—your School Supply House will demonstrate.

AUTOMATIC PENCIL SHARPENER CO.,

Chicago, Illinois

SHALL THE SUPERVISING PRINCIPAL ACT AS THE CHIEF SCHOOL EXECUTIVE OF SMALL TOWNS?

(Concluded from Page 42)

first securing an opinion from a higher authority. We take exactly the same view regarding the position occupied by our supervising principal—the educational expert employed to direct and supervise our schools."

In support of the position taken the committee quotes the foregoing authorities on the subject of school administration.

PERSONAL NEWS

- ♦ R. A. BUNNEY, of West Point, Nebr., becomes principal of the McCook, Nebr., schools.
- ♦ F. W. FROSTIC has begun his fourteenth year as superintendent of the Wyandotte, Mich., schools.
- ♦ MR. R. J. SCOFIELD has assumed the office of principal of the high school at Coleraine, Minn.
- ♦ MR. G. O. KELLY has assumed the position of superintendent of schools at Madison, Nebr.
- ♦ Sixteen new county superintendents in North Carolina have assumed office for the biennium 1933. The new superintendents are: J. B. HASH, Ashe county; GEORGE M. BOWMAN, Avery county; D. B. BURGESS, Camden county; J. GARY ALLEN, Carteret county; J. A. ABERNETHY, Edgecombe county; H. C. SAWYER, Gates county; J. H. MOODY, Graham county; A. B. ALDERMAN, Greene county; J. H. GENTRY, Iredell county; J. B. MADISON, Jackson county; JOE R. NIXON, Lincoln county; J. C. MANNING, Martin county; N. H. YELTON, Mitchell county; B. B. KESLER, Onslow county; H. G. ROBERTSON, Tyrrell county; J. T. REECE, Yadkin county.
- ♦ FRANK KUEHN was elected for the fourth term as superintendent of the Bloomington, Minn., schools.
- ♦ J. PAUL DOHL, of Minoa, Pa., was appointed principal at North End (Olean), N. Y.
- ♦ JOHN R. GRIGG has begun his third term as superintendent of Montgomery county, Ill. The term runs four years.
- ♦ H. W. McCULLOCH, of Chatsworth, was elected by the board of supervisors as superintendent for Livingston county, Ill.
- ♦ CHARLES ROBINSON, of Mt. Olympus, is the new superintendent of the Owensville, Ind., schools. LEE SHIRLEY, of Dana, Ind., assumes the principalship of

the high and grade schools at West Lebanon, Ind.

- ♦ ELBERT E. HARRIS retires from the superintendency of Perry county, Ill., and assumes the superintendency of schools at Niles Center, Ill.
- ♦ GEORGE SOUTHWICK, of Agosta, Marion county, was elected first superintendent of the newly consolidated Perry township, Ohio, schools.
- ♦ EARL S. KERR, former assistant superintendent at Canton, Ohio, has assumed the superintendency of schools at Salem, Ohio.
- ♦ L. D. SHUTER has been elected assistant superintendent of the Columbus, Ohio, schools. He succeeds G. E. Roudebush, who has become superintendent of the Youngstown, Ohio, schools.
- ♦ C. W. LADD, of West Leipsic, Ohio, has become the superintendent of the Cloverdale, Ohio, schools.
- ♦ DONALD B. TIMMONS is the new principal of the Lomond school, Shaker Heights, Ohio. FORREST A. IRWIN, his predecessor, becomes assistant principal of the Trenton State Teachers College.
- ♦ The school board of Hulmeville, Middletown, N. J., elected E. H. BURD as principal of the Hulmeville school.
- ♦ SUPT. HARRY HOWELL, for seven years superintendent of schools at Fayetteville, N. C., has accepted a position as supervising principal at West Palm Beach, Fla. SUPT. HORACE SISK, of North Wilkesboro, N. C., succeeds Harry Howell at Fayetteville, N. C. PRINCIPAL W. D. HALFACRE, of the Burlington high school, succeeds Horace Sisk at North Wilkesboro, N. C.
- ♦ MR. FRANK H. KOOS, assistant superintendent of schools at Winston-Salem, N. C., has resigned to accept a position at the University of Pennsylvania, Philadelphia, Pa.
- ♦ SUPT. F. R. RICHARDSON, of Marion, N. C., has accepted the superintendency of schools at Wadesboro, N. C., succeeding Supt. J. H. McIver, resigned.
- ♦ SUPT. CLAUDE F. GADDY has resigned as superintendent of schools in Union county to accept a position with the State Board of Equalization, Raleigh, N. C.
- ♦ SUPT. W. H. PITTMAN, of Edgecombe county, has accepted a position with the Division of Purchase and Contract. MR. A. S. BROWER, formerly comptroller of North Carolina State College of Agriculture and Engineering, Raleigh, N. C., is director of this division.
- ♦ MR. CLINE M. KOON, assistant director of the Ohio School of the Air, has been appointed "specialist in education by radio" for the United States Office of Education. His appointment is directly the result of the recognition on the part of the Office of Education of the growing importance of education by radio.

♦ PRINCIPAL E. H. BROOME, of Massey Hill high school, has been elected superintendent of schools in Union county, N. C., succeeding C. F. Gaddy, resigned.

♦ MR. E. H. HARTSELL, Elizabeth City, N. C., succeeds J. A. Jones as superintendent.

♦ MR. H. KENNETH CARLYLE has been elected to succeed himself as a member of the board of education at Otsego, Mich.

♦ SUPT. H. H. RIGG, of Otsego, Mich., has entered upon his eighth consecutive term as head of the Otsego schools.

♦ F. E. CONVERSE was elected superintendent of the Beloit, Wis., schools for the 35th time.

TRANSPORTATION COST LEAST EXPENSIVE IN NORTH CAROLINA

North Carolina transports more children to school, at a lower per-capita cost, than any other state in the Union, according to a recent report of the state education department.

The average cost per pupil transported in the state, according to the state department officials, was only \$11.67 in 1928-29, whereas the average for the United States as a whole was \$23.02. The highest cost per pupil was \$84.44 in the District of Columbia, and the highest cost per pupil in any state was in Wyoming, where it reached \$49.41.

In 1929-30, a total of 181,494 children in North Carolina were transported to school at public expense. Indiana ranked next to North Carolina in the number of children carried at public expense, with a total of 145,715 pupils. The total cost of transportation was, however, double that of North Carolina. While transportation cost \$2,000,000 in North Carolina, the State of Indiana paid nearly \$4,000,000 for its transportation service.

Transportation of school children was begun in North Carolina in 1912-13, using horse-drawn vehicles. In 1917 the first motor truck was used in Pamlico county. Beginning with 1914-15, 6 vehicles were used in transporting 247 children. At present more than 4,000 motor vehicles are being used in carrying daily 181,494 children to 1,266 schools. These conveyances travel 108,000 miles daily, or a distance more than four times around the earth.

School Buyers Shopping Guide

"CHO-SECO" INK PELLETS

(Made in America)
THIS ink never corrodes, gums nor molds.
Now used in more than forty States.
(Money back guarantee)
Mention this magazine for free sample.
A good surprise awaits you.
Cho-Seco Ink Pellet Co., Albany, N. Y.

MINNESOTA LETTERING SERIES

Vertical and Inclined Engineering Lettering
PRACTICE LETTERING PADS
Loose Practice Lettering Sheets
Sample alphabet on every sheet
PERINE BOOK CO.
1411 University Ave. S.E., Minneapolis, Minn.

SAVE 14 to 67%
on Maintenance Painting
WITH *Paasche* PORTABLE AIRPAINTING
COMPLETE UNITS
Write today for free booklet
PAASCHE AIRBRUSH CO.
1929 Diversey Pkwy., Chicago

BINDERS

Preserve your copies of the American
School Board Journal with our binders.
STRONG — DURABLE — COMPACT
The American School Board Journal
524-544 N. Milwaukee St. Milwaukee, Wis.

MODERN LATIN CONVERSATION

By GEORGE CAPPELLANUS, Ph.D., translated
from the German by BERTRAND F. KRAUS,
M.A.

Unique and original, this book
supplies lively Latin conversation
exercises about familiar, modern
activities—a text designed to stim-
ulate student interest in the study
of Latin.

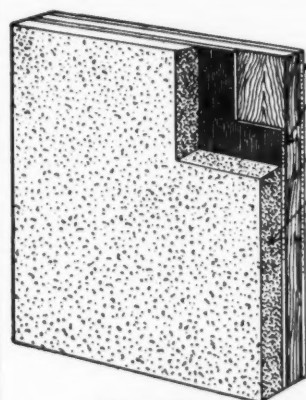
Price, \$1.16

THE BRUCE PUBLISHING CO.
524-544 N. Milwaukee St., Milwaukee, Wis.

CLASSIFIED

Aznoe's Available School Nurses: (A) R.N.
Oklahoma, age 37, 3 years county nurse,
6 years school nurse. Charming personality.
Prefers southwest. (B) R.N. Minnesota, age
31, post graduate in public health, 5 years
school nurse, nearly 2 years county nurse,
other varied experience, seeks public health
or school position. No. 3963, Aznoe's Central
Registry for Nurses, 30 North Michi-
gan, Chicago.

THE CURIOUS CAR - Craig
New supplementary reading material for the
primary grades. Price, 88 cents.
The Bruce Publishing Co., Milwaukee



"STANDARD" CORK Bulletin Board

THE BEST
BY
ANY TEST

Practical for display purposes in
halls and over blackboards in
schoolrooms. Easily installed in
old or new buildings.

USEFUL, ATTRACTIVE and PERMANENT
We Manufacture All Sizes. Write for Sample.

STANDARD BLACKBOARD CO.
Cor. Second and Walnut Sts. ST. LOUIS, MO.

SILICATE BLACK BOARDS

SILICATE VENEER PLATE
BLACK BOARD

Made of the best material thoroughly seasoned—
Framed or Unframed—All Frames are Oak Finished.
U. S. Government Contracts and New York City Board
of Education Specifications for 40 Years.

CORK BULLETIN BOARDS

Framed or Unframed Sizes 18 x 24 inches
Frames are Oak Finished to 4 x 6 feet.

Dealers write for catalogue.

N. Y. SILICATE BOOK SLATE COMPANY
20 VESEY STREET NEW YORK CITY

"CHICAGO" EQUIPMENT



Conforms to all official
regulations, as to size,
weight, shape, and bal-
ance and embodies the
"special design features,"
"select materials," and
"careful workmanship"
that have established the
"CHICAGO Line" as the line of "Better" equip-
ment. Built up to a standard regardless of price.

Write for Catalog No. 4,
"Gymnasium Equipment"

CHICAGO GYMNASIUM EQUIPMENT CO.
1835 West Lake Street, Chicago, U. S. A.

STAGE EQUIPMENT

Since 1869

Volland Scenic Studios, Inc.
3729-37 Cass Avenue St. Louis, Mo.

AMERICAN

Portable SCHOOLS

Comfortable, attractive,
sturdy classrooms in 1,
2, 3, 4 and 6 room units.
New double wall con-
struction, double floors,
double exits. Insulite lin-
ing, Austral Windows,
good lighting, good ven-
tilation. Write for cat-
alog and name of our
agent nearest you.



AMERICAN BUILDERS, INC.
601-611 Alaska St., Seattle, Wash.

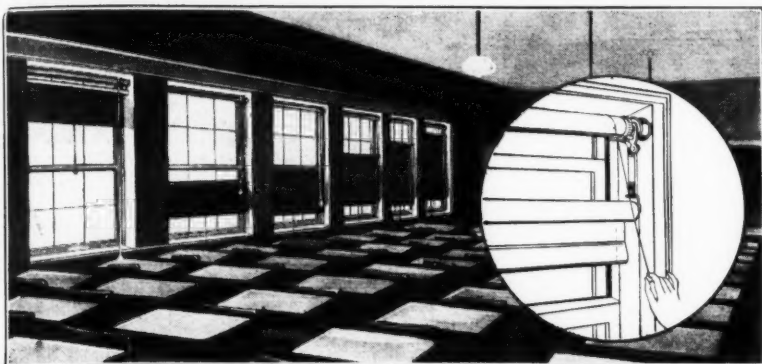
COMPLETE STAGE EQUIPMENT



TIFFIN
Scenic Studios
TIFFIN, OHIO

SEND FOR CATALOGUE

Equip With Ev-El-Eth



Shades carried by the EVELETH ADJUSTERS afford a hitherto unknown degree of:

comfort to the child

Because of perfect adjustment enabling him to receive benefit of properly regulated light without danger of eye-strain.

enjoyment to the teacher

Because Ev-el-eth Adjusters operate so easily and quietly.

Because they add to the tidy appearance of the room. The adjusting cord, although very strong, is light in weight and is placed inconspicuously at one side.

Because shade is held in perfectly level position at any desired height. The annoyance caused by shades tilting at various angles is unknown where Ev-el-eth level Adjusters are properly installed.

satisfaction to the School Board and Purchasing Committee

Because of moderate first cost.

Because of carefully selected materials and sturdy construction assuring a long term of service.

Because of the automatic hook which does away with the anchoring of cord to wall or casing.

Further information will be sent upon request.

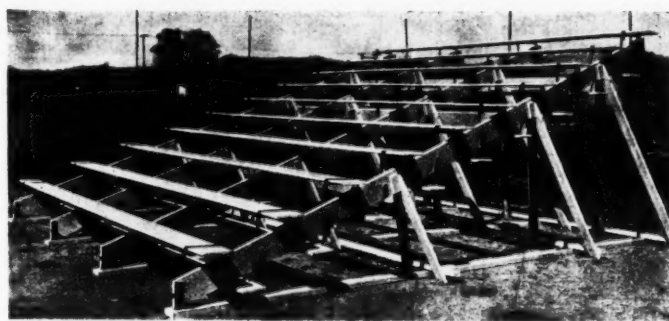
EVELETH MFG. CO.

11 Ashland Ave.

River Forest, Ill.

(Two miles west of Chicago city limits)

Manufacturers of Weather Strip Specialties and Shade Adjusters



STRONG—SAFE—PORTABLE MINTER BLEACHER SEATS

Strength where needed. Designed particularly for safety. Easily dismantled and stored after use. Provides comfortable seats for patrons of the athletic events of the school. Has proven popular and profitable for many seasons with numerous schools. So designed that when erected no careless workman can forget or omit the locking and bracing that makes the assembly safe and secure—an important feature. Prices on single and multiple units on application.

MINTER HOMES CORPORATION

School Department

Huntington, W. Va.

BLEACHERS

GYMS

AUDITORIUMS

BUILDINGS



For PERMANENT PROTECTION against damage by accident and prevent tramps and other undesirable persons from entering buildings through windows.



ORDER FROM YOUR JOBBER

BADGER WIRE & IRON WORKS

Cleveland and Twenty-sixth Avenues
MILWAUKEE WISCONSIN

PREMIER ENGRAVING COMPANY

Artists Engravers

Producers of Halftone and Line Engravings in one or more colors . . . Benday color plates . . . Two, three and four color process plates.

Commercial Art Department
Illustrating, Lettering, Retouching,
Designing, and Layouts.

814 WINNEBAGO ST.
MILWAUKEE, WIS.

Purchase
NOW
for fall classes

Let these BRUCE BOOKS help you!

Mathematics

GEOMETRY WORKBOOK, Complete Edition. By R. R. Wallace and H. B. Kingsbury. Price, 72 cents.

PLANE GEOMETRY WORKBOOK, Abbreviated Edition. By R. R. Wallace and H. B. Kingsbury. Price, 40 cents.

Vocational Guidance

VOCATIONAL GUIDANCE AND SUCCESS. By Edward J. Gallagher. Price, \$1.20.

MY VOCATIONAL GUIDEBOOK. By Robert H. Rodgers and Harry S. Belman. Price, 20 cents.

MY EDUCATIONAL GUIDEBOOK. By Robert H. Rodgers and Harry S. Belman. Price, 20 cents.

Plan and Record Books

DAILY LESSON PLAN BOOKS, Vocational and Academic. By Oscar H. Lipps. Price, 80 cents each.

PROGRESSIVE PLAN BOOK (Abridged Edition). By Adelbert W. Gordon. Price, 75 cents.

TEACHER'S STANDARD CLASS BOOK. By John L. Foust. Price, 55 cents.

Home Arts

FUNDAMENTALS OF SEWING. By Carrie Crane Ingalls. Price, \$1.60.

ELEMENTS OF ART AND DECORATION. By Adalene Benjamin Morgan. Price, \$1.28.

Biology

LAWS OF LIVING THINGS. By Edward J. Menge, Ph.D., Sc.D. Price, \$1.72.

LABORATORY STUDIES, DEMONSTRATIONS, AND PROBLEMS IN BIOLOGY. By Nathan H. Kingsley, M.Sc., and edited by Edward J. Menge, Ph.D., Sc.D. Price, \$1.28.

LABORATORY MANUAL FOR GENERAL BOTANY. By David Potter. Price, Part One, 96 cents; Part Two, \$1.08.

Languages

MODERN LATIN CONVERSATION. By George Capellanus, Ph.D., translated by Bertrand F. Kraus, M.A. Price, \$1.16.

SERIES LESSONS FOR BEGINNERS IN FRENCH (Revised Edition). By Edgar E. Brandon. Price, Part I, 80 cents; Part II, 80 Cents.

SERIES LESSONS FOR BEGINNERS IN SPANISH. By Edgar Ewing Brandon, M.A., Univ.D., and Daniel Da Cruz, Ph.D. Price, 96 cents.

Elementary Reading

POWDERPUFF, The Story of a Cottontail Rabbit. By Alvin M. Peterson. Price, 72 cents.

THE CURIOUS CAR. By Lillian K. Craig. Price, 88 cents

FOLK TALES RETOLD. By Margaret Gordon Arnold and Frances M. Beem. Price, 96 cents.

PINKEY DEW AND OTHER STORIES. By Rowena Califf. Price, 80 cents.

Write for copies on ten days' approval.

The Bruce Publishing Company

New York

Milwaukee

Chicago

Directory of Equipment and Supplies

ACID- AND CORROSION-PROOF CHEMICAL STONWARE

Knight, Maurice A.

ACOUSTICAL TREATMENT

Armstrong Cork & Insulation Co.
Cabot, Inc., Samuel
Celotex Company, The
Housing Company, The
Johns-Manville Corp.

ADJUSTABLE WINDOW SHADES

Athey Company, The
Draper Shade Co., L. O.
Maxwell & Co., Inc., S. A.

AIR CONDITIONING

American Air Filter Company, Inc.
American Blower Company
Buckeye Blower Company
Nelson Corporation, The Herman

AIR FILTERS

American Air Filter Co., Inc.

AIR WASHERS

American Blower Company

ARCHITECTS

(See Schoolhouse Architects' Directory)

ASH HOISTS

Gillis & Geoghegan

AUDITORIUM DRAPERIES

Volland Scenic Studios

AUDITORIUM SEATING

American Seating Company
Heywood-Wakefield Co.
Kunda Co., The Theodor
National School Equipment Co.
Peabody Seating Co.
Steel Furniture Co.
Welch Company, W. M.

AUTOMATIC TELEPHONE SYSTEMS

Automatic Electric, Inc.

BIOLOGICAL SUPPLIES

Welch Mfg. Company, W. M.

BLACKBOARD CLEANERS

Beckley-Cardy Company
Huntington Laboratories
Oakite Products, Inc.
Palmer Products, Inc.
Vestal Chemical Company
Weber Costello Company

BLACKBOARDS—MANUFACTURED

Beckley-Cardy Company
K-M Supply Company
N. Y. Silicate Book Slate Co.
Prose Maco Mfg. Company
Standard Blackboard Company
Valleyco Company, The
Weber Costello Company

BLACKBOARDS—SLATE

Natural Slate Blackboard Co.
N. Y. Silicate Book Slate Co.

BLEACHERS

Circle A Products Corp.

Minter Homes Corporation

Wayne Iron Works

BOILER COMPOUNDS

Hillyard Chemical Company

Huntington Laboratories

Palmer Products, Inc.

Vestal Chemical Company

BOILERS

Heggie Simplex Boiler Company

Kewanee Boiler Company

Spencer Heater Company

BOOK BINDERS' CLOTH BOARD

Binders Board Mfrs. Association

BOOK BINDERS' EQUIPMENT

Binders Board Mfrs. Association

BOOK CASES

Kewanee Mfg. Company

Peterson & Company, Leonard

Remington-Rand Business Service, Inc.

Welch Manufacturing Company, W. M.

BOOK COVERING MATERIALS

du-Pont de Nemours & Co., E. I.

BOOK COVERS

Holden Patent Book Cover Co.

BOOK PUBLISHERS

American Book Company

Beckley-Cardy Company

Bruce Publishing Co.

Ginn & Company

Gregg Publishing Company

Houghton Mifflin Co.

Leitell Brothers

Macmillan Company, The

Merriam Co., G. & C.

BOOKKEEPING MACHINES

Remington-Rand Business Service, Inc.

BOX LOCKERS (STEEL)

Durabilt Steel Locker Co.

BRONZE TABLETS, SIGNS, LETTERS

Russell & Sons Co., Albert

BRUSHES

Hillyard Chemical Company

Huntington Laboratories

Palmer Products, Inc.

Vestal Chemical Company

BUILDING MATERIALS

Asbestos Buildings Company

Celotex Company, The

Detroit Steel Products Co.

Housing Company, The

Johns-Manville Corp.

Northwestern Steel Products Co.

Sonneborn Sons, L.

Truscon Steel Company

BULLETIN BOARDS

Beckley-Cardy Company

Kewanee Mfg. Company

N. Y. Silicate Book Slate Co.

Sheldon & Company, E. H.

Standard Blackboard Co.

Valleyco Company, Inc., The

Weber Costello Company

Welch Mfg. Co., W. M.

BUSES

Dodge Brothers Corporation

York-Hoover Body Corp.

CABINETS—STORAGE—STEEL

Angle Steel Stool Company

Berger Mfg. Co.

Durabilt Steel Locker Co.

Lyon Metal Products, Inc.

Medart Mfg. Company, Fred

Northwestern Steel Products Co.

CABINETS—WARDROBE—STEEL

Durabilt Steel Locker Co.

Medart Mfg. Company, Fred

CAFETERIA EQUIPMENT

Angle Steel Stool Company

Blickman, Inc., S.

Kewanee Mfg. Company
Sheldon & Company, E. H.
Standard Gas Equipment Corp.
Welch Mfg. Co., W. M.

CAFETERIAS

Asbestos Buildings Company

CHAIRS

Algoma Wood Products Co.
American Seating Company
Angle Steel Stool Company
Beckley-Cardy Company
Clarin Manufacturing Co.
Fort Massac Chair Co., The
Heywood-Wakefield Company
Maple City Stamping Company
Peabody Seating Co.
Royal Metal Mfg. Co.
Standard School Fixtures Co.
Wark-Beacon Steel Furniture Co.
Welch Mfg. Co., W. M.

CHALKS

American Crayon Company

Beckley-Cardy Company

Binney & Smith Co.

Weber Costello Company

Welch Mfg. Co., W. M.

CHARTS

Nystrom & Co., A. J.

Weber Costello Co.

CHEMISTRY SUPPLIES

Welch Mfg. Co., W. M.

CLASSROOM FILMS

Eastman Teaching Films, Inc.
Electrical Research Products, Inc.
Photophone Equipment Corp. of America
H. C. A. Photophone, Inc.

CLEANERS—FLOOR

Oakite Products, Inc.

CLEANERS—WINDOW

Oakite Products, Inc.

CLEANING COMPOUNDS

Continental Car-Na-Var Corp.

Hillyard Chemical Co.

Huntington Laboratories

Oakite Products, Inc.

Palmer Products, Inc.

Vestal Chemical Co.

CLOCKS—PROGRAM

International Business Machines Corp.

Murphy-Davis Signal Co.

Standard Electric Time Co.

CLOTH BLACKBOARDS

Beckley-Cardy Company

N. Y. Silicate Book Slate Co.

Weber Costello Company

COMBINATION LOCKS

Corbin Cabinet Lock Company

Dudley Lock Corporation, The

Kewanee Mfg. Company

Miller Keyless Lock Co., J. B.

National Lock Co., The

COMMUNITY BUILDINGS

Asbestos Buildings Company

CORK TILE AND CORK CARPET

Armstrong Cork & Insulation Co.

Congoleum-Nairn, Inc.

CRAYON COMPASSES

N. Y. Silicate Book Slate Co.

Weber Costello Company

CRAYON TROUGHS

Dudfield Manufacturing Company

Weber Costello Company

CRAYONS

American Crayon Company

Beckley-Cardy Company

Binney & Smith Co.

Weber Costello Company

Welch Mfg. Co., W. M.

DAMP-PROOFING

Sonneborn Sons, L.

Truscon Steel Company

DEADENING QUILT

Cabot, Inc., Samuel

Celotex Company, The

DESKS—OFFICE

Angle Steel Stool Company

Beckley-Cardy Company

Imperial Desk Company

Welch Mfg. Co., W. M.

DIPLOMAS

Beckley-Cardy Company

Welch Mfg. Co., W. M.

DISHWASHING COMPOUNDS

Hillyard Chemical Company

Huntington Laboratories

Oakite Products, Inc.

Vestal Chemical Company

DISINFECTANTS

Continental Car-Na-Var Corp.

Hillyard Chemical Co.

Huntington Laboratories

Palmer Products, Inc.

Vestal Chemical Company

DOMESTIC SCIENCE EQUIPMENT

Christiansen, C.

Kewanee Mfg. Co.

Kimball Company, W. W.

Peterson & Co., Leonard

Sheldon & Company, E. H.

Welch Mfg. Co., W. M.

DOORS

Richards-Wilcox Mfg. Co.

DOORS—STEEL-FIREPROOF

Detroit Steel Products Co.

Truscon Steel Company

DRAFTING DEPT. FURNITURE

Angle Steel Stool Company

Christiansen, C.

Kewanee Mfg. Company

Sheldon & Company, E. H.

Welch Mfg. Co., W. M.

DRIERS—HAND AND FACE

Chicago Hardware Foundry Co.

DRINKING FOUNTAINS

Clow & Sons, James B.

Crane Co.

Rundle-Spence Mfg. Company

Taylor Company, Halsey W.

DUPLICATORS

Dick Co., A. B.

Ditto, Inc.

Standard Mailing Machines Co.

ELECTRIC DRIERS

Chicago Hardware Foundry Co.

ELECTRICAL EQUIPMENT

Westinghouse Electric & Mfg. Co.

ELECTRICAL REFRIGERATION

General Electric Company

ENGRAVERS

Premier Engraving Company

ERASER CLEANERS

Palmer Products, Inc.

Weber Costello Company

ERASERS

Beckley-Cardy Company

Palmer Products, Inc.

Weber Costello Co.

FENCES

American Wire Fence Company

Anchor Post Fence Company

Page Fence Association

Stewart Iron Works Co., The

Wayne Iron Works

Wickwire Spencer Steel Company

FILING SYSTEMS

Remington-Rand Business Service, Inc.

FIRE ALARM SYSTEMS

International Business Machines Corp.

Standard Electric Time Company

FIRE ESCAPES

Butler Mfg. Co.

Potter Manufacturing Corp.

FIRE EXIT LATCHES

Potter Manufacturing Corp.

Vonnegut Hardware Co.

FIRE INSURANCE

Home Insurance Company, The

FIREPROOF DOORS

Detroit Steel Products Co.

Truscon Steel Company

FIREPROOFING MATERIALS

Asbestos Buildings Company

FLOOD LIGHTS

Giant Mfg. Co.

Hill-Standard Company

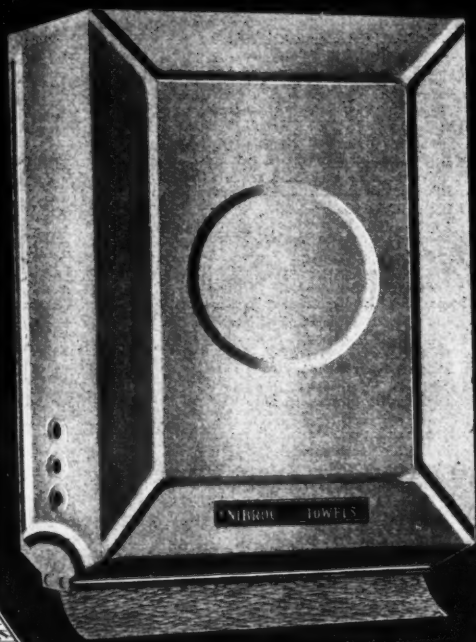
FLOOR COVERING

Armstrong Cork & Insulation Co.

Congoleum-Nairn, Inc.

Heywood-Wakefield Co.

Sloane Co., W. & J.



Guardians
of health
Exponents
of economy

NIBROC TOWELS

THE very finest and most economical paper towels you can obtain—they exceed all expectations! Their outstanding emollient and antiseptic qualities, together with their great strength and absorption will convince you. **NIBROCS** are made only from long, pure spruce fibres, in *brilliant white* and *golden brown*. One single NIBROC will thoroughly dry the wettest hands without falling to pieces. **In school washrooms, NIBROCS are a necessary factor in maintaining wholesome conditions. They encourage children to wash their hands more often and eliminate the spreading of infectious diseases found on common cloth or roller towels. NIBROCS are lintless, and are served clean and fresh, individually from dust-proof, key-locked, enameled cabinets, which are loaned without charge. Write for generous supply of NIBROCS today.**



FOUNDED 1852

Portland, Maine

Directory of Equipment and Supplies

(Continued from Page 133)

METAL ROLLERS—WINDOW SHADE

Rice & Co., Chas. W.

METHODS—CLEANING

Oakite Products, Inc.

MICROSCOPES

Bausch & Lomb Optical Co.

Lobs, Inc., E.

Spencer Lens Company

Welch Mfg. Co., W. M.

MIMEOGRAPHS

Dick Co., A. B.

MODELING CLAY

American Crayon Company

MOTION PICTURE MACHINES

Eastman Teaching Films, Inc.

Electrical Research Products, Inc.

Phototone Equipment Corp. of America

R. C. A. Photophone, Inc.

PAINT SPRAYING EQUIPMENT

DeVilbiss Mfg. Co., The

PAINTS

Sonneborn Sons, L.

U. S. Gutta Percha Paint Co.

PAINTS—TECHNICAL

Sonneborn Sons, Inc., L.

Truscon Steel Company

PANIC EXIT DEVICES

Potter Manufacturing Corp.

Vonnegut Hardware Company

PAPER

American Crayon Company

Beckley-Cardy Company

Kalamazoo Vegetable Parchment Co.

PASTE

Sanford Mfg. Co.

PENCIL SHARPENERS

Automatic Pencil Sharpener Co.

PENCILS

American Crayon Company

PHYSICS EQUIPMENT

Welch Mfg. Co., W. M.

PIANOS

Kimball Company, W. W.

PLAYGROUND APPARATUS

Chicago Gymnasium Equipment Co.

Everwear Mfg. Co.

Hill-Standard Company

Medart Mfg. Company, Fred

Naragansett Machine Company

PLAYGROUND ENCLOSURES

American Wire Fence Company

Anchor Post Fence Company

Page Fence Association

Stewart Iron Works Co., The

Wickwire Spencer Steel Company

PLAYGROUND LIGHTING EQUIP.

Giant Manufacturing Company

Hill-Standard Company

PLUMBING FIXTURES

Clow & Sons, James B.

Crane Company

Hoffmann & Billings Mfg. Co.

Rundie-Spence Mfg. Co.

Sloan Valve Company

Taylor Company, Halsey W.

Vogel Company, Joseph A.

POINTERS

N. Y. Silicate Book Slate Co.

Weber Costello Company

POLISHING AND WAXING EQUIP.

Finnell System, Inc.

Hillyard Chemical Company

Huntington Laboratories

Johnson & Son, S. C.

Lincoln-Schluster Floor Machinery Co.

Vestal Chemical Company

PORTABLE BLEACHERS

Circle A Products Corp.

Minter Homes Corporation

Wayne Iron Works

PORTABLE SCHOOLHOUSES

American Builders, Inc.

Asbestos Buildings Co.

Circle A Products Corporation

Harris Brothers Company

Minter Homes Corporation

PROJECTION LANTERNS

Bausch & Lomb Optical Co.

Spencer Lens Co.

PROJECTION MACHINES

Eastman Teaching Films, Inc.

Electrical Research Products, Inc.

Phototone Equipment Corp. of America

R. C. A. Photophone, Inc.

PUBLIC ADDRESS SYSTEMS

International Business Machines Corp.

Western Electric Co.

PUMPS—Vacuum, Condensation,

Centrifugal, Sump

Nash Engineering Co.

Nash Engineering Co.

RACKS, GYM. BASKET (STEEL)

Durabilt Steel Locker Co.

RANGES

Standard Gas Equipment Corp.

Westinghouse Electric & Mfg. Co.

RECORD SYSTEMS

Remington-Rand Business Service, Inc.

REFRIGERATION

General Electric Company

RE-INFORCED STEEL

Berger Mfg. Company

Truscon Steel Co.

REPRODUCTION SYSTEMS

Multi-Selecto Phonograph, Inc.

Western Electric Company

ROLLING PARTITIONS

Richards-Wilcox Mfg. Co.

Horn Folding Partition Co.

Park, Winton & True Co.

Wilson Corp., Jas. G.

SASH OPERATING DEVICES, STEEL

Detroit Steel Products Co.

Truscon Steel Company

SCIENTIFIC APPARATUS

Bausch & Lomb Optical Co.

Standard Electric Time Company

Welch Mfg. Co., W. M.

SCREENS—PICTURE

Eastman Teaching Films, Inc.

SEWAGE EJECTORS

Nash Engineering Co.

SEWING MACHINES

Singer Sewing Machine Co.

SHADE ADJUSTERS

Evelth Mfg. Co.

SHOE LOCKERS (STEEL)

Durabilt Steel Locker Co.

SHOWERS

Clow & Sons, James B.

Crane Co.

Hoffmann & Billings Mfg. Co.

Powers Regulator Company

SIGNS

Russell & Sons Co., Albert

SLATED CLOTH

Beckley-Cardy Company

N. Y. Silicate Book Slate Co.

Weber Costello Company

SMOKE SCREENS—METAL DOORS

Butler Manufacturing Co.

SMOKE SCREENS—METAL SASH

Butler Manufacturing Co.

SOAP DISPENSING EQUIPMENT

Palmer Products, Inc.

SOUND PICTURES

Electrical Research Products, Inc.

Phototone Equipment Corp. of America

R. C. A. Photophone, Inc.

SOUND SYSTEMS

Electrical Research Products, Inc.

SPRAY PAINTING EQUIPMENT

DeVilbiss Mfg. Co., The

STAFF LINERS

Weber Costello Company

STAGE CURTAINS,

EQUIPMENT AND SCENERY

Armstrong Studios

Electrical Equipment Co.

Tiffin Scenic Studios

Twin City Scenic Company

Universal Scenic Studios, Inc.

Volland Scenic Studios

Weiss & Sons, I.

STAINS

Johnson & Son, S. C.

STAIR TREADS

Alberene Stone Company

American Abrasive Metals Co.

Norton Company

Sanymetal Products Company

STATIONERY CABINETS—STEEL

Durabilt Steel Locker Co.

Medart Mfg. Company, Fred

STEEL CHAIRS

Angle Steel Stool Company

Royal Metal Mfg. Company

STEEL JOISTS

Truscon Steel Company

STEEL LOCKERS

Berger Manufacturing Co.

Durabilt Steel Locker Co.

Lyon Metal Products Co.

Medart Mfg. Company, Fred

Naragansett Machine Co.

Northwestern Steel Products Co.

STEEL STORAGE CABINETS

Angle Steel Stool Company

Berger Mfg. Co.

Durabilt Steel Locker Co.

Lyon Metal Products, Inc.

Medart Mfg. Company, Fred

Northwestern Steel Products Co.

STOOLS—STEEL ADJUSTABLE

Angle Steel Stool Company

Royal Metal Mfg. Company

STOKERS

Iron Fireman Mfg. Co.

TABLETS—BRONZE

Russell & Sons Co., Albert

TABLES

Kewaunee Mfg. Company

Kimball Company, W. W.

Mutschler Bros. Company

Remington-Rand Business Service, Inc.

Sheldon & Company, E. H.

Standard School Fixtures Co.

Welch Mfg. Co., W. M.

TEACHER AGENCIES

Natl. Association of Teacher Agencies

Teacher Agencies Directory

TEACHERS' CABINETS (STEEL)

Durabilt Steel Locker Co.

TECHNICAL PAINTS

Sonneborn Sons, L.

TELEPHONE SYSTEMS

Automatic Electric Company

International Business Machines Corp.

Standard Electric Time Company

Western Electric Company

TEMPERATURE REGULATION

Johnson Service Company

Powers Regulator Company

TENNIS NETS

American Wire Fence Company

TOILET PAPER AND FIXTURES

A. P. W. Paper Company

Palmer Products, Inc.

TOILET PARTITIONS

Clow & Sons, James B.

Milwaukee Stamping Co.

Sanymetal Products Company

TOILET SEATS

Brunswick-Balke-Collender Co.

TOOL CABINETS

Sheldon & Company, E. H.

TOOL CABINETS—STEEL

Durabilt Steel Locker Co.

TOWELS

A. P. W. Paper Company

Brown Company

Palmer Products, Inc.

TYPEWRITERS

Remington-Rand Business Service, Inc.

VACUUM CLEANING SYSTEMS

Spencer Turbine Company, The

VACUUM PUMPS

Nash Engineering Company

VALVES—FITTINGS

Clow & Sons, James B.

Crane Company

Sloan Valve Company

VARNISHES

American Crayon Co.

Hillyard Chemical Company

Huntington Laboratories

Vestal Chemical Company

VENTILATING SYSTEMS

American Air Filter Co.

Buckeye Blower Company

Nelson Corp., The Herman

VISUAL INSTRUCTION EQUIPMENT

Bausch & Lomb Optical Co.

VOCATIONAL EQUIPMENT

Christiansen, C.

Columbia School Supply Co.

Kewaunee Mfg. Company

Kimball Company, W. W.

Richards-Wilcox Mfg. Co.

Sheldon & Company, E. H.

Sjostrom Co., Inc. John E.

Welch Mfg. Company, W. M.

WARDROBES

Austral Window Co.

Circle A Products Corp.

Evans, W. L.

K-M Supply Company

Park, Winton & True Co.

Prose-Maco Mfg. Company

Richards-Wilcox Mfg. Company

Wilson Corp., Jas. G.

WARDROBE CABINETS—STEEL

Durabilt Steel Locker Co.

Medart Mfg. Company, Fred

WASTE PAPER BASKETS

National Vulcanized Fibre Co.

Northwestern Steel Products Co.

WASTE RECEPTACLES

Solar-Sturges Mfg. Co.

WATER CLOSETS

Clow & Sons, James B.

Crane Co.

Vogel Co., Joseph A.

WATER COLORS

American Crayon Company

Binney & Smith Company

Talens School Products, Inc.

WATER PURIFIERS

Clow & Sons, Jas. B. (R. U. V.)

Wallace & Tiernan, Inc.

WATERPROOFING

Sonneborn Sons, L.

Truscon Steel Company

WEATHERSTRIPS

Athey Company, The

WINDOW FIXTURES

Austral Window Company

Williams Pivot Sash Company

WINDOW GUARDS

Badger Wire & Iron Works

Northwestern Steel Products Co.

Stewart Iron Works Co., The

WINDOW SHADE CLOTHS

du Pont de Nemours & Co., E. I.

Buyers' News

TRADE PRODUCTS

Announce New X-Ray Stereoscope. The Bausch & Lomb Optical Co., of Rochester, N. Y., has announced a new, improved X-ray stereoscope, which allows the placing of the film in either the vertical or the horizontal position and supplies the angle of convergence necessary for natural stereoscopic vision. The instrument is designed to provide conditions of vision comparable to normal, and offers a rather simple technique. It is easily cleaned and adjusted.

Complete information and prices may be obtained upon request.

New DeVilbiss Cleaning Compound for Schools. The DeVilbiss Company, of Toledo, Ohio, has just placed on the market a specially prepared, highly concentrated paste for cleaning dirt from paint, varnish, lacquer, and enameled surfaces in schools and other public buildings. The compound is in semipaste form and may be used on interior and exterior surfaces. With the addition of water, it may be diluted in the proper strengths for different work. It is economical in use, has good spreading quality, and may be applied with a spray gun or a brush. After the paste has dried, it may be sponged or washed off with a hose.

The DeVilbiss cleaning compound may be obtained in 1-gallon, 5-gallon, and 50-gallon containers. Information and prices may be obtained by any school official or school custodian, upon request.

TRADE NEWS

Change of Address. The Kewanee Boiler Corporation, at Detroit, Mich., has announced that its new location is now at 1344 Broadway. The office will maintain the same facilities for handling the Kewanee business so that there will be no interruption in the handling and shipment of all school orders.

Durabilt Company Elects Officers. The Durabilt Steel Locker Company, of Aurora, Ill., has announced a change in its office personnel. The new officers comprise Mr. E. D. Kaser, president; Mr. V. C. Kaser, vice-president; Mr. H. S. Hatch, treasurer and manager of sales; and Mr. W. H. Graham, secretary. Mr. D. V. Trapp has become purchasing agent, succeeding E. D. Pauly.

The new officers have been connected with the firm practically since its inception and have been largely responsible for the design, manufacture, and marketing of its products. No changes are contemplated in the operation of the firm's business, but it will be the aim to turn out the same high-grade products as in the past.

Change in Firm Name. C. Christiansen, Chicago, Ill., manufacturer of laboratory furniture, has announced a change in the firm's name. The firm will hereafter be known as the Christiansen Company, having been incorporated recently under that name.

The firm of C. Christiansen was established in 1898, by Mr. Carl Christiansen. Mr. John T. Christiansen has been connected with the firm for the past thirty years, and Mr. Joseph C. Christiansen for fifteen years, both of whom are sons of the senior member of the firm.

With the decease of Mr. Carl Christiansen two years ago, the firm was incorporated, with Mr. John T. Christiansen as president and treasurer, and Mr. Joseph C. Christiansen as vice-president and secretary.

American Seating Company Desks Selected. The Universal type of adjustable tablet-arm chairs manufactured by the American Seating Company and the Universal desks made by the same firm, have been selected as official seating for the Johns Hopkins University Summer School for the Deaf. These desks and chairs have been especially chosen because of their correct-posture features, which make them exceedingly comfortable, keep the pupil from becoming restless and nervous, and leave the mind free to concentrate upon study.

TRADE PUBLICATIONS

Solving the School Heating Problem. The Spencer Heater Co., of Williamsport, Pa., manufacturers of school heating systems, has just issued an interesting 16-page booklet entitled, *Finding the Answer to the School Heating Problem*, which should be helpful to school-board members, school architects, and school administrative officials.

The booklet offers a means of analyzing school heating expense. The new unit offers a more fair and dependable guide for purposes of comparison than most of the measures previously used. The Spencer system insures clean, smokeless, uniform heat for school buildings; it provides automatic heat at lowest cost, offers economies in labor cost; and provides a self-contained gravity-feed stoker with a decided saving in first cost. The advantages of Spencer magazine-feed boilers for school use are outlined in detail. A list of typical

schools using this system of heating has been included for the benefit of the school official and architect.

Complete information will be available to any school official upon request.

Crane Brass Fittings for Copper Tubing. The Crane Company, 836 South Michigan Ave., Chicago, Ill., has just issued a booklet, describing its line of brass fittings for copper tubing, which has been developed in response to a demand for the use of copper tubing for underground water service and plumbing supply lines.

The booklet lists an extensive line of brass fittings, including rough brass stops and drains, fittings for flared copper tubing, together with a list of sizes of fittings, and tables of dimensions.

Complete information and prices will be sent to any school official who is interested.

The Williams Pivot Sash Company, East 37th St. at Perkins Ave., Cleveland, Ohio, has issued a 23-page booklet, illustrating and describing its reversible window equipment in the double-hung and plank-frame types.

The Williams reversible windows are especially adapted to schools because of the absolute control over the ventilation and the ease with which they are cleaned. These windows are constructed to give the least trouble, are weather-tight to prevent rattling, may be easily cleaned on the outside, and are an economic necessity. The main advantage is that either or both sash may be tilted for adequate ventilation.

Complete information and prices may be obtained by any school official, or architect, upon request.

Laying Sofi Oak Floors. The Southern Oak Flooring Industries, of Little Rock, Ark., have issued a descriptive pamphlet entitled, *How to Lay and Finish Sofi Oak Floors*, which will be helpful to school authorities and architects who are confronted with the problem of suitable and economical flooring for schools.

Sofi oak flooring seeks to promote fine oak floors through research and study of the markets, and to render assistance to those desiring information on the proper methods of floor construction and the correct use of oak flooring. Sofi oak flooring is a highly refined flooring product, and when properly laid and finished, produces a floor of unequalled character, permanence, and beauty.

Complete information and prices will be sent to any school official, or architect, upon request.

Tucker Peerless Folding Furniture. The Tucker Duck & Rubber Company, of Ft. Smith, Ark., manufacturers of peerless folding furniture, has issued an illustrated booklet, describing its Tucker-way wood folding chairs, its line of folding chairs and stools, and its folding tables for temporary use. Complete information and prices may be obtained by any interested school official upon request.

New Columbia Catalog of Steel Furniture. The Columbia School Supply Company, of Indianapolis, Ind., has issued a catalog, describing and illustrating its latest in movable steel school desks, posture movable adjustable desks, schoolroom tables, typewriter desks, tablet-arm chairs, folding chairs for assembly rooms, instructors' desks, auditorium chairs, cabinets, domestic-science tables, manual-training benches, laboratory, and kindergarten furniture.

The name of the Columbia School Supply Company has been linked directly with the development of steel school furniture, since the firm was the first to develop and manufacture this type of equipment. The widespread acceptance of Columbia steel school furniture has led to the manufacture not only of steel furniture and supplies, but to a complete line of school accessories.

School officials who are interested in steel school furniture may obtain complete information and prices upon request.

Finnell Kote and Solar Brite for School Cleaning. The Finnell System, Inc., of Elkhart, Ind., manufacturers of electric scrubbing machines and Finola scouring materials, has just issued a four-page illustrated circular, describing the use and special advantages of Finnell Kote and Solar Brite for cleaning and polishing purposes.

Finnell Kote is a prepared wax for all kinds of floors and floor coverings. It sets, or hardens, in a very short time, polishes instantly, produces a hard, durable finish, reduces slipperiness, and cuts waxing costs.

Solar Brite is a pure anhydrous neutral soap content made of vegetable oils. It is heavier in density than the average product sold at comparative prices, is equally good for cleaning linoleum, rubber tile, terrazzo, wood, and marble floors, and is useful for removing stains from waxed floors.

Complete information and prices may be obtained by anyone interested by writing to the Finnell System, Inc., at Elkhart, Ind.

Eastman Classroom Films Catalog for 1931. Eastman Teaching Films Co., Inc., of 343 State St., Rochester, N. Y., has issued its first comprehensive

booklet on classroom films. The films listed are widely used in American classrooms and will be found valuable for instructional purposes. The films are classified under applied art, English, geography, health, nature study, and science.

Issue Instructors' Manual. The National Broadcasting Co., has issued the 1931-32 Instructors' Manual for the Damrosch Music Hour Appreciation broadcasts. Full explanations of each of the twelve concerts are provided. Copies are available from the offices of the company at 711 Fifth Avenue, New York.

Leitz 300,000th Microscope Issued. The E. Leitz Optical Works, at Wetzlar, Germany, recently completed their 300,000th microscope, a number which has not been approached by any other optical firm, and which indicates the leadership of this firm in the field of microscopical manufacture. Following a custom of the firm, the new microscope has been presented to Dr. Ludwig Aschoff, of Freiburg, in Breisgau, Germany, a scientist and physician, who is well known in the pathological and anatomical field of science.

The new Leitz Ultrapak equipment will be available to scientific investigators. It is expected to completely revolutionize microscopical technique through its application, features, and details of specimen, which permit observation of specimens under conditions which had been impossible to accomplish up to the present time.

PERSONAL NEWS

Mr. Ware Dies. Mr. Orlando Ware, treasurer of James B. Clow & Sons, Chicago, Ill., died at his home in that city on August 2, at the age of 72. Mr. Ware had seen more than thirty years of continuous service with the firm of James B. Clow & Sons, and during his long service had made many friends in the trade.

Mr. Ware entered the firm's service more than thirty years ago as a clerk in the credit and claim department. His ability to get and hold friends in the trade was a factor in attaining success in his difficult position of credit man and collector. In 1920, he became treasurer of the firm. In that position, he increased his contacts with plumbers and contractors and continued his former policies which had made him successful as an official of the company.

AMONG BOARDS OF EDUCATION

♦ WILLIAM L. LETTAN is the new school-board member at Spotswood, N. J.

♦ The school board of Virginia, Minn., has elected JALMER JOHNSON, chairman; DR. H. C. OLSEN, clerk; ALFRED NELSON, treasurer.

♦ The school board at Greeneville, Tenn., has elected the following officers: T. W. STEVENS, chairman; DR. CECIL LAUGHLIN, vice-chairman; DR. W. T. MATHIAS, purchasing agent.

♦ At Topeka, Kans., FRANK EDSON was elected president of the board of education; JOHN LINN, vice-president; H. L. ARMSTRONG, clerk; and ELIZABETH DONALDSON, treasurer.

♦ DR. L. E. MURRAY is the new member of the St. Ignace, Mich., board of education.

♦ MRS. HAZEL B. STAFFELD continues as secretary of the Geneva, Ohio, board of education.

♦ G. ELMER McARTHUR was elected president of the Eaton Rapids, Mich., board of education; MARTIN HANSEN, secretary; and H. O. MILLER, treasurer.

♦ The Metamora, Mich., board of education elected GEORGE ROSSMAN, president; LLOYD GILBERT, secretary; and LILLIE M. WECKHAM, treasurer.

♦ The school board of St. Louis Park, Minn., elected DANIEL K. WHALEN, president; H. A. PARK, clerk; and HARRY L. HUMASON, treasurer.

♦ GEORGE H. MCINERNEY and BYRON P. CORVELL were reelected members of the school board of Pittsford and Perinton, N. Y.

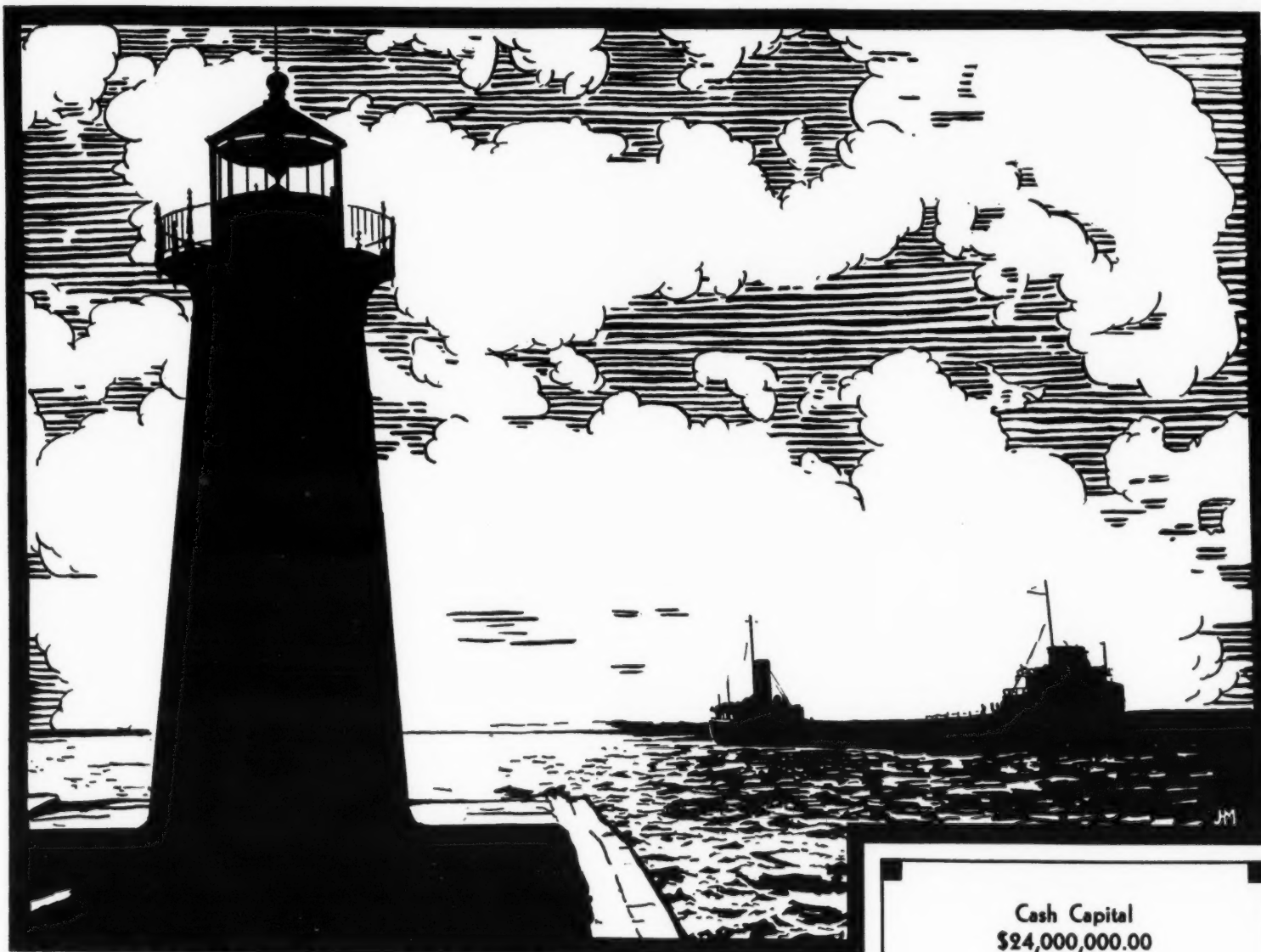
♦ EMMETT DUSTEN is the new member of school district No. 97, Princeville, Ill.

♦ The school board of Evansville, Ind., has reorganized for the school year 1932, with the election of MR. E. J. FEHN as president, MRS. PAUL LYNCH as secretary, and MR. GEORGE CLIFFORD as treasurer.

♦ MR. F. LANGTON CORWIN, and MR. THEODORE W. BRIGHAM were recently elected for a three-year term to the board of education of the Greenport, Long Island public schools. MR. HARRY W. SWEET was appointed to fill a vacancy on the board caused by resignation.

♦ The Benton Harbor, Mich., board of education has reorganized with DR. CARL A. MITCHELL and FLORENCE VAN ANTWERP as new members.

♦ The board of education at Proctor, Minn., has recently reorganized with MR. ALLEN CLAUSSEN as chairman, and MR. C. H. WILES as secretary. MR. C. A. STROMBERG is a new member supplanting MR. JOHN JOLLYMORE who was a member for nine years and who refused reelection. The board of education has reelected MR. A. I. JEDLICKA for his fourteenth consecutive term.



STRENGTH IS SAFETY!

THE lighthouse is a tower of safety—guiding seamen along a dangerous rock-bound coast throughout the night and day. It serves these sturdy men ceaselessly and is a factor of safety for their ships at all times. » Financial strength sufficient to withstand any storm is a factor of safety in a sound insurance company. » "The Home of New York", a strong and reputable company, has stood the test for over seventy-eight years by providing insurance protection of thorough dependability—never failing to adjust losses Dollar for Dollar and guiding their policyholders through the storm.

Cash Capital
\$24,000,000.00

Net Surplus
\$36,398,755.35
(Accumulated over 78 years)

Surplus to Policyholders
\$60,398,755.35

Additional Funds
\$38,936,368.00
(Pro Rata Unearned Premiums)

Reserved
for miscellaneous accounts, taxes, dividends,
and other obligations
\$12,754,865.55

Assets
Cash on hand, funds conservatively invested
or current balances payable when due
\$112,089,988.90

THE HOME INSURANCE COMPANY NEW YORK

ORGANIZED 1853

59 MAIDEN LANE

WILFRED KURTH, President

Strength

« »

Reputation

« »

Service

After the Meeting

AN INCENTIVE TO RUN

From Shamokin, Pa., comes the following incident which shows that the JOURNAL is read in the homes of school-board members. Member W. J. Wiest, prominent business man, was approaching the end of his first term on the board. One day his ten-year old daughter said to him, "Daddy, are you going to run for school director again?" "What makes you ask, my child?" queried the father.

"Because I like to read 'After the Meeting,'" came the quick response.

GOOD TESTIMONIAL

A western school-board officer in testifying to the efficiency of a popular fire escape wrote: "I'm glad to advise you that one of the board members escaped through the tube after the stairway was aflame. The tube is still in first-class condition."

ENGLISH AS SHE IS WROTE

Teachers grow gray because they must contend with so many queer things which children say and do. The following definitions and statements are taken from an old collection of genuine examination questions collected in the "eighties" by Caroline B. LeRow:

Capillary — a little caterpillar.

Demagogue — a vessel containing beer and other liquids.

Epicac — a man who likes a good dinner.

Grammar gives us the languish.

A word governed by another word is called its regiment.

A Horace uncle line is a line that isn't so crooked.

The principal products of the United States are earthquakes and volcanoes.

The principal sports of New England are cotton, tobacco, and ice.

The Puritans found an insane asylum in the wilds of America.

The stamp act was to make everybody stamp all materials so they would be null and void.

Hauthorn wrote the Dear Slyder.

Chaucer was the father of English pottery.

QUALIFIED

Admiral Bradley Fiske likes to tell the following story to illustrate any point about qualification.

"What struck Swetson?" a man asked at the club, "he failed in medicine, he failed in the law and he failed in the ministry, and now he's moved into a \$5,000 flat in Riverside drive."

"Well, you see," said a companion, "Swetson has started to write magazine articles on 'Why Men Fail' and he's made a mighty good thing of it. Well qualified, you know."

PAGE WRIGLEY

Professor: "What's the most common impediment in the speech of American people?"

Freshman: "Chewing-gum."



The Better News

"Well, Mums, better news this time!"

"Darling, I'm so glad. You've passed at last?"

"Well, not exactly passed, but I'm top of those that failed." — Punch.

YES, WHY?

"Johnnie," said the teacher, "I want you to write a three-page theme, telling me why you came into my English class."

The next day Johnnie handed in the following: "Dear teacher, I will give you ten dollars if you tell me why."

The high-school principal was exceedingly angry: "So you confess that this unfortunate young man was carried to the pond and drenched? Now, what part did you take in this disgraceful affair?"

"The right leg, sir," answered the sophomore meekly.

Teacher: "Johnny, what's the difference between a battle and a massacre?"

Johnny: "A battle is where a whole lot of whites kill a few Indians, and a massacre is where a whole lot of Indians kill a few whites." — Brooks Field Weekly.

INFERENCE

The school inspector prepared to give the children an intelligence test.

"Now, children, close your eyes."

The inspector made a noise like a dog panting. "Now open your eyes and tell me what I was doing."

"Kissing teacher," came the reply from one of the boys in a back seat.

HIS REASON FOR RUSHING

The man had been brought into court for driving at 50 miles an hour.

"Well," said the judge, "what excuse do you have for such a rush?"

"You see, Judge, my wife telephoned that the Parent-Teacher Association was going to have a rummage sale and I was beating it home to save my other pair of pants."

Judge: "Dismissed."

REASON FOR COMPLAINT

Jimmie came into the kindergarten with a woe-begone expression on his otherwise cheerful face.

"What is the matter, James?" asked kind-hearted Miss Froebel.

"Daddie drowned all our kittens," explained Jimmie.

"How terrible!" said Miss Froebel.

"And," sobbed Jimmie, "he promised that I could do it."

HABIT

Dr. John C. Almack, of Stanford University, says that some teachers habitually betray their occupation by correcting persons with whom they come in contact. In arguing that teachers should not give way to habits easily formed in the classroom, he is fond of telling a story.

Two Irishmen in the olden days were playing a game of cards.

"Wasn't that a spade I dealt you?" said Mike.

"It was," said Pat. "How did you guess?"

"That's easy, boy," answered Mike. "Ye spat on your hands before you picked it up."

Bookmen's Anecdotes and Reminiscences

HOW STOCKS WILL BE REMEMBERED

Arthur C. Stocks, who represented Ginn and Company, in Minnesota some years ago, has a keen sense of humor, and will relish a good joke even if it is turned upon himself. This was demonstrated when he told quite frankly what happened to him during an N.E.A. meeting held at Boston.

Those who knew Stocks also knew that he was quite gallant in the presence of ladies. He was youthful in appearance, enthusiastic in manner, and athletic in figure.

While in Boston it fell to his lot to entertain a bevy of young ladies. His gallantry after being temporarily transplanted from Minnesota to the refined atmosphere of Boston swelled out to delightful proportions. He would take the ladies to Nantasket Beach where all Boston goes in the summer time to eat sea food and whiff the salt air.

He prepared a little menu which included rare and delicious lobsters, together with some delightful accessories.

It so happened that one of the young ladies, the queen of the lot, had never indulged in this kind of sea food, and politely expressed her unwillingness to do so now. It required all of Stock's art of persuasion and argumentation to induce her to try one at least and see how she liked it. She finally yielded and to the pleasure and surprise of Stocks, the young lady liked the dish of lobsters so well that she ate several.

The dinner was a success. The young Minnesotan proved himself a delightful entertainer, and with the ladies he had now established a reputation as an epicure as well as a bright conversationalist.

When the party broke up and the compliments and adieus were in order the little queen of the party shook Stock's hand warmly and with the sweetest innocence, said:

"Mr. Stocks, I stand very much indebted to you for the pleasure of the evening — and for that lobster. Do you know I shall never see a lobster again, but that I shall think of you."

Her companions screamed for the police. Stocks shot into the dark without further adieu. That night he saw himself in a dream in a body covered in vermillion red, with claws and finny tail — looking like the famous table delicacy.

It took him really several years until he could conclude that he might venture to laugh over the matter.

PRESENCE OF MIND

A well-known publisher accidentally met one day, in a popular New York hotel, a bookman whom we will call Mr. Roller, because that is not his name.

"By the way, Mr. Roller," said the publisher, "I had a conversation with some gentlemen in the educational publishing line a few days ago and your name came up for discussion."

"Indeed! I trust they said something good about me."

"Well, not exactly. One of them, Mr. Roller, said that you didn't have an honest hair on your head."

"Well," responded the agent, not in the least disturbed, "from the way my hair has been coming out lately it doesn't matter much whether they are honest or dishonest." And taking off his hat he displayed a head in an advanced stage of baldness.

The publisher walked away saying to himself, "That's the coolest head I've struck yet."

Familiar Frankness

Dr. I. M. Blank, of Superior University, lectures to Parent-Teacher Societies. Recently his wife attended.

"I'm very tired," said the lady when they had arrived at home.

"You should not be," said the doctor, "you have not delivered a lecture today."

"No," said the wife, yawning, "but I've listened to one."

A New Angle

Teacher: "Who originated the first geometrical proposition?"

Student: "Noah."

Teacher: "How is that?"

Student: "He constructed an arc."

FREE

FOR A LIMITED TIME

A NEW 90 PAGE BOOK
30 ILLUSTRATIONS

"MODERN FLOOR FINISHING"
BY F. N. VANDERWALKER
EDITOR OF PAINTING AGE

•
SEND FOR YOUR COPY TODAY

- This book gives invaluable information on floor finishing and maintenance problems. Shows you the most satisfactory and economical methods of caring for floors of every type.

- Some entirely new principles and methods are discussed, which offer greater

protection, longer life, new beauty to floors, with ease and economy of maintenance. Both the methods and materials used have been given the utmost rigorous tests under practical conditions.

- Every building manager, superintendent, engineer—any one vitally interested in floor problems—should be familiar with this book.

- This free offer is for a limited time only. (Regular price of book \$1.00). Cut out this coupon and clip to business card or letterhead.

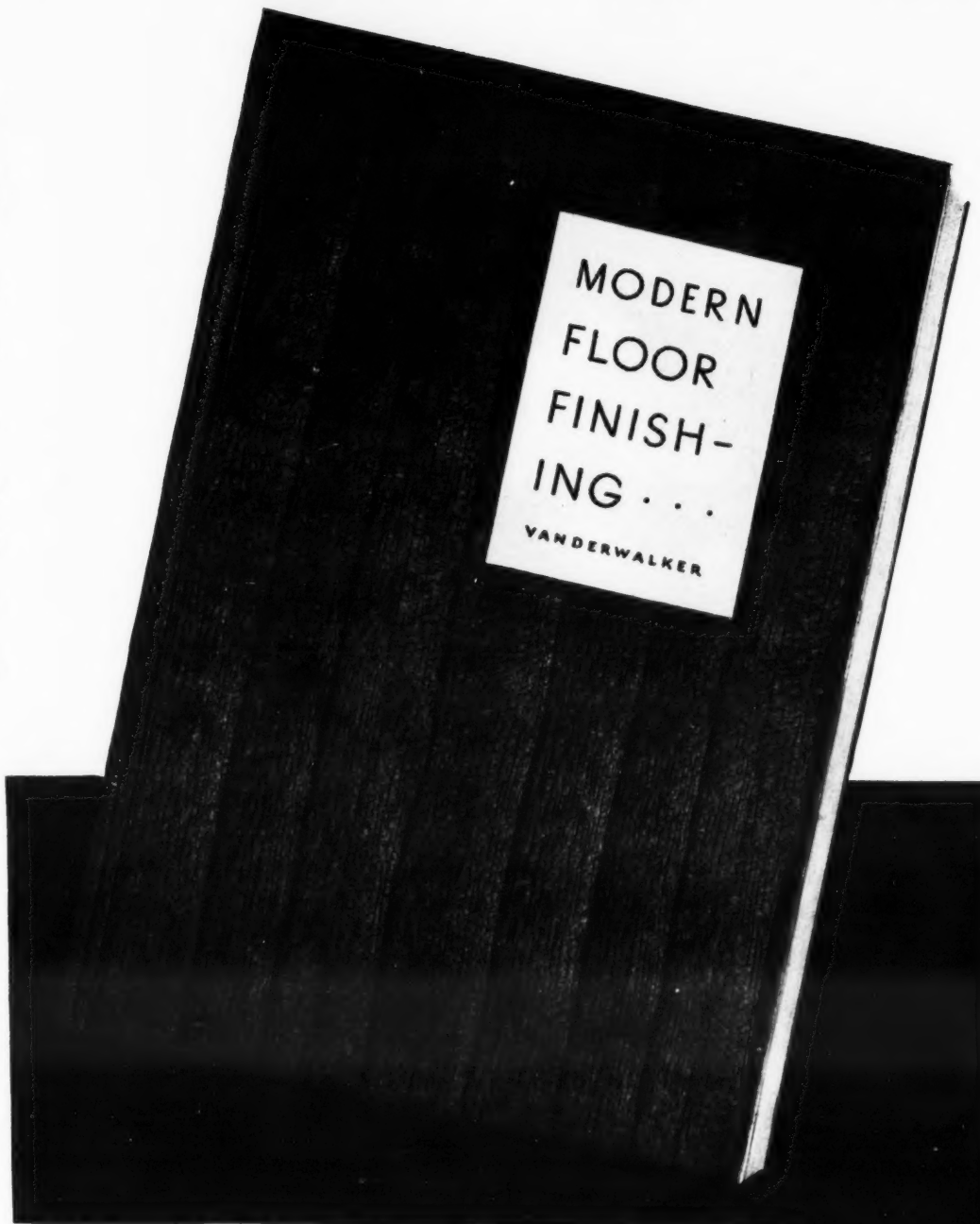
• **S. C. JOHNSON & SON,** Floor Finishing & Main-

tenance Authorities, Racine, Wisconsin. Please send me without obligation my free copy of F. N. Vanderwalker's 90-page illustrated book "Modern Floor Finishing." Name _____

Address _____

City _____

State _____



THE GREAT DISASTER OF 1931

(A Clipping from the "Daily Microbe")

EXTRA

**60,000 KILLED
500,000 INJURED
ENTIRE COLONY DESTROYED**

A last minute dispatch to this newspaper, records a new disaster of terrifying proportions, completely eclipsing that of a year ago. Without any warning whatsoever the microbe colony in the exclusive Maple Heights School was completely devastated, with tremendous loss of life. One of the few survivors reports that the linoleum layers arrived promptly at 8 a. m. Saturday. By mid-afternoon not a living microbe remained in the once fashionable colony. The list of dead is still incomplete.



To the microbes, the laying of W. & J. Sloane Linoleum in the Maple Heights School was a disaster of the first degree. To more enlightened individuals it represents merely another step forward in the cause of school sanitation.

School boards in all sections of the country are turning to W. & J. Sloane Linoleum as an economical and sanitary solution of their floor-covering problems. W. & J. Sloane Linoleum is especially effective against microbes. Extra grinding of ingredients, plus 32% extra pressure in the calender rolls, gives it an unusually smooth, lasting surface. Double-waxing at the plant insures long life with a minimum of care. W. & J. Sloane Mfg. Co., Trenton, New Jersey.

This informative book, "Linoleum—What It Is—How It Is Made," contains a wealth of information of interest to School Boards. Obtain your free copy by addressing Advertising Department, W. & J. Sloane, 577 Fifth Avenue, New York.

W. & J. SLOANE LINOLEUM

*save money
and get
better results*

whether you
SCRUB

...or **WAX-
POLISH**

9 models from which to choose

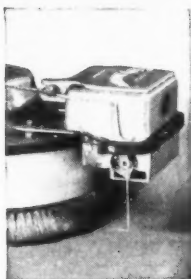
FINNELL offers — not just a floor machine — but a complete system of floor maintenance. The Finnell Scrubber-Polisher is a remarkable device — scrubbing or waxing any type of floor incomparably better than old hand methods, and in a fraction of the time. Even more important, it is made in nine different sizes. This makes it adaptable to the largest and smallest installations — in each case meeting the requirements of both efficiency and economy.

the Safe, Sure Vegetable Soap

It isn't the amount of alkali in a soap that determines its value as a cleaning agent; it is the fatty acid content. In the best soap the rich, raw fats form an emulsion in which dirt particles are suspended to be washed away.

That is why SOLAR-BRITE is the soap to use on school floors. It cannot injure any floor surface. Gently and surely it loosens the dirt. It speeds mopping and gets better results. For machine scrubbing it is unexcelled.

Waxes and Polishes in one operation



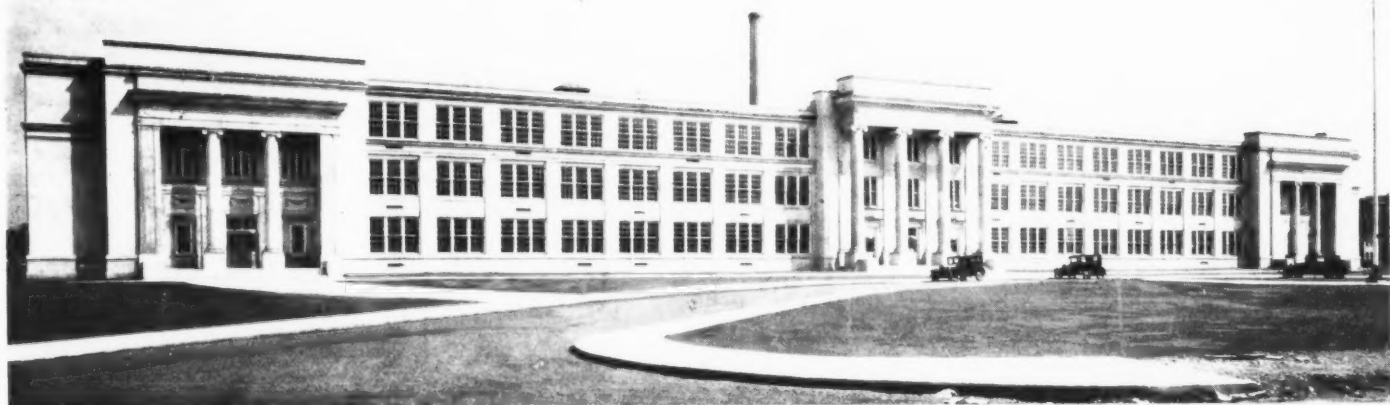
FINNELL-KOTE is virtually a solid wax, applied in a melted state by means of a special electrically heated dispenser attached to any Finnell polisher. Brushes distribute the melted FINNELL-KOTE and in a few seconds it hardens to a thin wear-resisting film. Once again over it with the brushes brings this surface coating to a beautiful, durable lustre.

This new preparation must ultimately make ordinary paste and liquid waxes obsolete; for it cuts in half the time required to polish a floor. At the same time it applies a finish that will withstand the hard usage of school floors. It can even be mopped several times without losing its polish.

Investigate now. Whether you need only a drum of soap or a complete floor maintenance system, we will be glad to confer with you, to make a survey if needed, or arrange a demonstration. Address FINNELL SYSTEM, Inc., 809 East St., Elkhart, Indiana.



Standard School Equipment



Eastern High School, Lynn, Mass., Sanborn & Weed, Architects., AUSTRAL WINDOWS were used throughout.

“Or Equal”?

AUSTRAL WINDOWS and AUSTRAL WARDROBES are synonymous with quality. There is no equal. If the architect requires a first class article his specifications should be rigidly followed out and cheap competition eliminated.

▼ 101 ▼
PARK AVE AUSTRAL WINDOW CO. NEW YORK
▼ CITY ▼